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DIVERTING GOVERNMENT WORK FROM SMALL HIGH TECHNOLOGY FIRMS TO FFRDC'S

HEARING

BEFORE THE

SUBCOMMITTEE ON
INNOVATION, TECHNOLOGY AND PRODUCTIVITY

OF THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

DIVERTING GOVERNMENT WORK FROM SMALL HIGH TECHNOLOGY FIRMS TO FFRDC'S

APRIL 7, 1987

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CONTENTS

Statement of Senators: Page
- Levin, Hon. Carl, a U.S. Senator from the State of Michigan 1
- Kerry, Hon. John F., a U.S. Senator from the State of Massachusetts 50

Statement of:
- Peebles, Harry L., Principal Deputy Assistant Secretary, Management and Administration, Department of Energy, Washington, DC, accompanied by Berton J. Roth, Director, Procurement and Assistance Management Directorate, Department of Energy, Washington, DC 31
- Priddy, Dr. Robert G., Director, U.S. Army Missile and Space Intelligence Center (MSIC), Redstone Arsenal, Huntsville, AL, accompanied by Dr. Louis M. Cameron, Director, Army Research and Technology, Pentagon, Washington, DC 20
- Rennie, John C., president, Pacer Systems Inc., Billerica, MA 113
- Vincent, Dr. Robert K., president, GeoSpectra Corp., Ann Arbor, MI 4

APPENDIX

Case history of Government work diverted from Small Business to FFRDC 139
Excerpt from the Economy Act 140
Project Order Act 141
Department of Defense Instruction: Regulations Governing the Use of Project Orders 142
Department of Energy Regulation on Reimbursable (Funds-In) Policy and Procedures 143
Department of Energy Regulations on Institutional Planning Process 144
Department of Energy Regulation on Research and Development Work Performed for Others by Government-Owned, Contractor-Operated Facilities 145
OFPP Policy Letter 84-1 146

ADDITIONAL MATERIAL

Letter dated April 3, 1987, to Senator Levin, from Kenton Pattie, senior vice president, International Communications Industries Association, Fairfax, VA 154

HEARING DATE

April 7, 1987:
- Morning session 1

DIVERTING GOVERNMENT WORK FROM SMALL HIGH TECHNOLOGY FIRMS TO FFRDCs

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TUESDAY, APRIL 7, 1987

U.S. SENATE,
SUBCOMMITTEE ON INNOVATION,
TECHNOLOGY AND PRODUCTIVITY,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:30 a.m. in room 428A Russell Senate Office Building, Hon. Carl Levin (Chairman of the Subcommittee) presiding.

Staff present: William B. Montalto, Esq., procurement policy counsel; Robert M. Wilson, Esq., minority chief counsel; and Tracy A. Crowley, hearing clerk.

Also present: Linda J. Gustitus, staff director; Elise S. Bean, counsel; and Bradley C. Vass, professional staff member, Subcommittee on Oversight of Government Management, Committee on Governmental Affairs.

STATEMENT OF HON. CARL LEVIN, A U.S. SENATOR FROM THE STATE OF MICHIGAN

Senator LEVIN. Good morning, everyone. The Small Business Subcommittee will come to order. This is the first hearing of the Subcommittee on Innovation, Technology and Productivity. The purpose of this hearing is to look at a serious problem involving America's high tech small business community—the improper diversion of Federal research and development contracts from private industry to Government-owned research facilities known as Federally Funded Research and Development Centers or "FFRDCs."

This improper diversion of Government work at the hands of Federal agencies results in higher costs for the American taxpayer, through the loss of competition which results, and it is also a cost to the small business community through the loss of Government contracts. It also may result in lesser quality products.

To understand what high tech firms are up against when they seek research contracts from the Federal Government, we will explore in detail what happened to one small business called the Geo-Spectra Corp. We will hear about Geospectra's 16-month effort to obtain a contract from the Army Missile and Space Intelligence Center to perform computer analyses of satellite photographs.

After submitting an unsolicited proposal, undergoing inspection by an Army representative, receiving and responding in a timely manner to a competitive contract solicitation, undergoing a price audit, and receiving indications that its proposal was going to be accepted, GeoSpectra was abruptly notified that the solicitation had been canceled. The day after the Army canceled the solicitation, the Army asked the Department of Energy to have the Los Alamos National Laboratory, an FFRDC, do the same project.

We will examine how and why after working with a company for over a year the Army turned to an FFRDC to do research which GeoSpectra could have easily handled at less cost.

The Subcommittee has learned many disturbing facts about this procurement. It has learned that Los Alamos was awarded the work without submitting a written proposal or putting anything writing, and that the Department of Energy, which is the official sponsor for Los Alamos, approved the project even though it is unrelated to the lab's research mission; does not require the special capabilities of an FFRDC, and is work appropriate for the private sector.

The Subcommittee has learned that the Army's negotiations with Los Alamos, unlike it's 16-month negotiation with GeoSpectra, took less than three weeks. The subcommittee has also learned that what GeoSpectra had offered to do for $200,000, Los Alamos will be doing for $300,000—that's 50 percent more.

I would like to emphasize here that the purpose of this hearing is not to blame Los Alamos for what happened. As far as our staff has been able to determine, Los Alamos did not seek to take this project away from GeoSpectra. The lab apparently didn't even know about the project until it was approached by the Army and given a $300,000 offer.

I would also like to emphasize that the purpose of this hearing this is not criticism of FFRDCs in general. Properly utilized, FFRDCs perform critical work for the Country, meeting sensitive and long-term research needs that private companies are not equipped to handle.

Our purpose today is different—to determine whether the special status accorded to FFRDCs and the easy access to them by the services has become an unfair stumbling block to small high tech business seeking Government work.

The key here is to understand the special privileges that these research centers enjoy. They include facilities paid for by the Government, an agency sponsor, special access to Government data, and most importantly, an exemption from the competitive procurement rules that apply when agencies seek work from other persons and organizations.

These procurement rules are contained in the Competition In Contracting Act of 1984, CICA, which generally requires agencies to issue their contracts on a competitive basis. FFRDCs were granted an exemption from CICA on the theory that they do work which the private sector is not capable of performing. In practical terms, however, this exemption means that agencies go through much less paperwork when they assign work to an FFRDC than when they issue contract solicitations to private firms.

This ease of work assignment may now be leading agencies to send even routine work requests to FFRDCs just to avoid the requirements for competition associated with most contracts.

There are rules on the books right now which prohibit the routine use of FFRDCs. The Office of Federal Procurement Policy said as much in Governmentwide regulations issued in 1984. These guidelines state that FFRDCs can only perform work which requires the special relationship offered by an FFRDC to a Federal agency, and which falls within the mission of the particular research center asked to do the work.

In addition, the Economy Act prohibits interagency transactions which take business away from the private sector. In particular, the statute states that an agency cannot procure goods or services from another agency if the work can be done, "as conveniently and cheaply by a commercial enterprise."

Agency regulations further implement these legal requirements. On their face, these rules should be enough to limit agencies' use of FFRDCs to those cases where special capabilities are required, but Federal agencies may be ignoring or misapplying these provisions.

In the case history that we will examine today, for example, both the Army and the Energy Department appear to have ignored these and other procurement rules when they diverted the photography project from GeoSpectra to the Los Alamos National Laboratory. The subcommittee also believes that the GeoSpectra example is not unique. While researching the details of the GeoSpectra case, the subcommittee staff found other suspect procurements between the Army and Los Alamos involving such items as the development of routine management information systems, and projects originally intended to be the subject of contract solicitations to private industry.

For example, one project involving a management information system started as a contract performed by a private firm. Later, when the Army encountered delays with its procurement office in issuing a contract for additional work, it sent the project to Los Alamos and Los Alamos issued a subcontract to a private firm to do the work. Still later when other delays occurred, Army asked Los Alamos to do some of the work itself and Los Alamos complied.

Persons in the business community have also confirmed diversion of work from the private sector, telling the subcommittee staff that GeoSpectra is far from the only firm to lose a research contract to an FFRDC without a satisfactory explanation. We will be hearing testimony from a representative of the private sector later on today.

Concerns with agency practices favoring FFRDCs over small firms grow greater when one considers the increasing amount of dollars being directed to these research centers.

From 1982, prior to the time that FFRDCs received their CICA exemption, to 1985, the latest year for which figures are available, Federal funding for FFRDCs increased from about $4.8 billion to $5.7 billion. That is a jump of about $1 billion in 3 years. The Department of Defense appears to have increased its use of FFRDCs at an even more rapid pace. For example, in a 4 year period, from 1981 to 1985, the Department of Defense increased its funding to Los Alamos by almost 600 percent, from $9 million to over $52 million annually. Moreover, since 1984 the Department of Defense has created three new FFRDCs of its own and is seeking to create still another this year.

Our research indicates that the improper diversion of government work to FFRDCs is a serious problem for the small business community. Innovative and specialized small businesses, especially in the high-tech area, are vital to America's economy. The Federal Government should be encouraging, not impeding, the growth of these small companies.

Procurement practices which take money out of their hands to give it to Government-owned facilities don't make sense, and in fact are often a violation of the law.

We have to start enforcing the rules against such procurement practices, and if that is not enough, strengthen the prohibitions against improperly diverting work from the private sector.

We have to let Federal agencies know that we won't tolerate practices which favor Government-owned research facilities at the unjustifiable expense of the high-tech small business community. Such conduct simply must stop.

Now let me call on Senator Weicker.

Senator **WEICKER**. Nothing further.

Senator **LEVIN**. The first witness that we have is Dr. Robert Vincent who is the president of GeoSpectra Corp. of Ann Arbor, MI. It is a particular pleasure to welcome you, Dr. Vincent—not under these circumstances, but because you have an important story to tell, not just on your own behalf, but in terms of a lot of other businesses similarly situated. We welcome you to the Subcommittee and ask that you submit your entire statement for the record. It will be made part of the record, and if possible you should summarize that statement for the Subcommittee.

STATEMENT OF DR. ROBERT K. VINCENT, PRESIDENT, GEOSPECTRA CORP., ANN ARBOR, MI

Dr. **VINCENT**. Thank you, Senator. First, by way of background, GeoSpectra is a small company that I started in 1974 as soon as I finished my Ph.D. at the University of Michigan. I started it with $1,100 I borrowed from a credit union and it is still going. We have spun another company off since in 1981 that was sold to Kodak in 1986 for medical imaging.

GeoSpectra has been a leader, a pioneer, in image processing, particularly related to satellite data from LANDSAT. We have used it for oil, gas, and mineral exploration primarily, but in the last couple or 3 years we have tried to diversify somewhat into aerospace and defense image processing because of the relatively poor market in the petroleum and mining industry.

The story today begins in the spring of 1985. The State of Michigan, specifically the Commerce Department, had strongly recommended to several small businesses that we travel down to Huntsville, AL for Small Business Opportunities Day. GeoSpectra took them up on that offer. We paid our own expenses, but the State of Michigan was able to arrange a briefing by several people from different laboratories at Redstone Arsenal in Huntsville, AL.

It was an exciting thing to hear all that was going on down there because we thought we could help with some of them. We spent an extra day there, my marketing vice president and I, and made our first contact with Missile Intelligence. We talked with Francis

Kline. He liked our technology, particularly the technology relating to ratio imaging.

I don't want to get too technical on this except to tell you when you take satellite data of one place on the ground at one time and perform automatic classification of it, the same results are difficult to achieve at another place and time. Ratioing is something that helps extend spectral "signatures" from time 1 to time 2, and from place 1 to place 2.

He liked it very much, so much so that 1 month to 2 months later he sent a representative from his laboratory, Mr. Don Slaymaker, up to our offices in Ann Arbor, MI. We enjoyed his company and spent a whole day talking about our technology. He left impressed. In fact, before he left he suggested that an unsolicited proposal might be well received, but with no guarantees.

We submitted an unsolicited proposal that summer for working on the problem that he had told us about. It had to do with satellite mapping, which, of course, is our forte.

About 2 or 3 months after we sent him the unsolicited proposal he called to tell us that it looked like it would not be possible for them to sole-source the contract to us. He said that they were going to have to go out on bids for it, which he hoped to do in the new fiscal year that began October 1, 1985, and extended to September 30, of 1986.

We kept waiting and waiting for the RFP to come out, that is, the Request for Proposal. Finally it came out in July 1986. We had only from then until September 30 before the fiscal year ended. We responded with a proposal, and got it in 3 days early. I think it was mid-August when that was submitted. We got a call on September 3 from Donna Camp at Redstone Arsenal. I think she is in the accounting office down there. I am not sure that she is assigned just to Missile Intelligence. It might be that the Army has a general accounting group down there.

At any rate, Donna Camp called and told my marketing vice president that we would have to be audited by September 5 in order to get this year-end money. That was 2 days from the day she was calling. My marketing vice president told her that we had been audited just 2 months earlier for a contract that we had been awarded for around $50,000 from the Missile Command on an unrelated matter, but still having to do with our image processing technique, and that that audit should hold for 2 years.

She said that it had not reached their computers yet, they didn't have it in their records, so we would have to be audited again. She said she had called the DCAA office in Detroit and told them that we needed an audit and they said, "This is short notice. We doubt that we can get somebody out in less than 2 weeks," which would have been too late.

My marketing vice president Peter Pleitner, who is very tenacious, told her that we would call DCAA and see what they could do. He did and he talked to Ms. Judith Parsons who had done the auditing for us in July of that year. Ms. Parsons, very heroically said, "I'm coming out there tomorrow."

Peter Pleitner called Donna Camp back the same day that she called us, September 3, and told her that we would be audited by the 5th. She acted relieved and said, "I'll be waiting to hear."

Well, Judith Parsons did come and she completed the audit on September 5. I was with her the morning of that day, and she said of course we had passed. We had just passed 3 months earlier, and the reason she could do it quickly was because she only had 2 or 3 months to catch up on.

So she then called Donna Camp and told her on the 5th, on the deadline date, that we had passed our audit. She, of course, didn't have time to get her written statement in by then, but the phone statement was in and she submitted her written report later.

It wasn't until September 15 that we heard anything more, and it was Don Slaymaker calling, the same gentleman that had come up to visit us. Don Slaymaker said that on the 8th, which was the Monday after the 5th when we were audited, that he and Mr. Kline had been asked by Peter Kirkland, their section chief, to cancel the RFP because it was clear that we could not be audited by the end of the fiscal year. So they signed the RFP cancellation.

Don Slaymaker was absolutely shocked, I believe genuinely so, to hear that we had been cleared on September 5, and that the audit had been completed. He groaned and said, "I was afraid something like this might happen." That is all he said about that. I think he was genuinely dismayed. I think Francis Kline may have been dismayed also.

He told us that they were going to do what they could to see if they could get us a contract sole-sourced in the new fiscal year, without promising anything, since we had already been audited and gone through competition. Then he told us that the money had been whipped out to Los Alamos National Lab.

We didn't know quite what to do. For about 1 month we just let things simmer, and I was just ready to accept fate. Then mid-October I got a call from Los Alamos. It was a Mr. Mike Cannon. He invited me to come out to Los Alamos. He said, "We'll pay you a day's consulting, $1,300, including expenses." He said, and this is a quote, "We have been funded to do the work that you proposed."

I took that to mean that this was where we were going to get our money in the new fiscal year. I thought I was going out to Los Alamos to either decide what new proposal we had to write, or to sign a contract. Understand, our company has primarily done work with industry, not with Government in our past years. He asked me to bring a copy of my proposal. He also told me on the phone that they had not written a proposal yet for the money that they had gotten, nor had they seen a copy of my proposal. I brought a copy of my proposal with me to Los Alamos. We spent the morning talking technically and I shared very openly what our approach to the problem was, and they shared what their approach was; which was very, very similar to ours.

At noon when we were having lunch I said, "When are we going to get the contract? " He looked at me and said, "Well, you understand that this day of consulting may be all that GeoSpectra gets out of this."

That was the very first time I had any inkling that this money was going to be not only sent to Los Alamos, but that it was going to stay there. I asked him how he could take food out of the mouths of business when it had cost us something like $30,000 to prepare the proposal twice. We had the ideas on how to solve the problem, and then somebody else gets to perform it that hadn't even written a proposal for the work.

He said, "Well, we are like a business here. Those were his words. "We are like a business here." We have to supply people with money for their jobs." Then Jim White, who is one of his fellow workers there, said, "Yes, and our overhead rates are very high. He said, "Mike Cannon here, for instance, is charged out $216,000 a man year." It may have been $206,000, but it was definitely over $200,000.

My blood began to boil. I don't want to brag, but I've got to tell you that I have had over 60 technical publications on the subject of remote sensing and have been in remote sensing for 21 years. I have a Ph.D. from the University of Michigan in geology; a master's degree from the University of Maryland in physics; I am on practically every who's-who you can name including Who's Who in the World, Who's Who in Aviation and Aeronautics and some others; and yet my time is charged out as president and chairman of the board of my company at about $120,000 a year. Something is definitely wrong here.

I came home very angry, and within 1 or 2 days I approached Senator Levin's staff. Senator Levin and I had met a couple of years ago and I told him we were going to try to get into some Government contracting. He said, "Fine. If you run into any obstacles or barriers, I will be happy to help you."

Well, this is my obstacle or barrier. I don't expect to get that money, but in summary I would like to say this. There is something wrong in our Country, particularly pertaining to high technology. There are two things about this incident, which I am sure is much more widespread than this one case, that really disturb me. The first is that this kind of practice is going to greatly discourage high-tech companies, particularly small ones, from bringing their technology to the Department of Defense, and we need that technology for a strong defense in the future. I believe in a strong defense. We are going to divorce our defense from that new high technology if this keeps up.

Second, and really more insidious, this type of practice fails to nourish the very high tech community that we talk about as being so important for the future of this Country. If Federal dollars do not produce commercial byproducts in the course of doing the research that is needed for defense, then defense research becomes too expensive for the American public. It has to spawn commercial byproducts for us to be able to afford what our defense needs. This cannot be done if the work is performed in non-profit national laboratories, which in my opinion are absolute black holes as far as research dollars going in producing no commercial products coming out.

It is in small businesses, particularly the high-tech ones, where the rubber meets the road as far as new technology producing new commercial products is concerned.

My final recommendation is to accentuate, by whatever means possible, the Defense Department and the Federal Government doing business with high-tech companies at the expense of national labs. The national labs, I believe, are needed for certain special projects, but have become far too outreaching in the amount of work that they will accept and do. Thank you.

[The prepared statement of Dr. Vincent follows:]

HEARING ON FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFRDCs) BEFORE THE SUBCOMMITTEE ON INNOVATION, TECHNOLOGY AND PRODUCTIVITY, OF THE SENATE COMMITTEE ON SMALL BUSINESS, APRIL 7, 1987

Dr. Robert K. Vincent, President

March 30, 1987

GeoSpectra
CORPORATION
P.O. Box 1387 333 Parkland Plaza Ann Arbor, Michigan 48106-1387 U.S.A.

EXECUTIVE SUMMARY

GeoSpectra Corporation, a 13-year-old remote sensing company from Ann Arbor, Michigan, first made contact with the U.S. Army's Redstone Arsenal at Small Business Opportunities Day activities in the spring of 1985. By August, 1986, GeoSpectra had submitted two satellite image processing proposals, one unsolicited and the second in response to a formal request for proposals (RFP), to the Army Missile and Space Intelligence Center (MSIC) at Redstone Arsenal. Despite the fact that GeoSpectra was the lowest of two bidders on the RFP, the RFP was cancelled and the funds, increased by 60%, were sent to Los Alamos, a non-profit national laboratory, which received the funds before it even submitted a proposal for the work.

It appears that a contract based on a technical idea submitted to (MSIC) by a qualified high tech company was deliberately guided to a non-profit national laboratory, even though the latter charged 60% more and had less expertise in the required technology than the company, which was also the low-bid respondent to an earlier request for proposal on the same subject. This demonstrates the unfair advantage that non-profit national laboratories have over businesses, large and small, in securing government funding under current practices. Unlike high tech companies, non-profit national laboratories are black holes for research funds, with little to show by way of new commercial products that result in large world markets for American technology. National defense research becomes far more expensive when it fails to stimulate the creation of new commercial products.

For these reasons, I recommend that the role of American high tech companies be increased at the expense of non-profit national laboratories with regard to federal research and development funds.

HEARING ON FEDERALLY FUNDED RESEARCH AND DEVELOPMENT
CENTERS (FFRDCs) BEFORE THE SUBCOMMITTEE ON INNOVATION,
TECHNOLOGY AND PRODUCTIVITY, OF THE SENATE COMMITTEE ON
SMALL BUSINESS, APRIL 7, 1987

Testimony by Dr. Robert K. Vincent, President
GeoSpectra Corporation
333 Parkland Plaza
Ann Arbor, Michigan 48103

GeoSpectra Corporation is a remote sensing firm that I founded in 1974 with $1,100 borrowed from the University of Michigan Credit Union, just 3 months after completing my Ph.D. in geology from the University of Michigan. For its first 12 years, GeoSpectra primarily dealt with petroleum and mining companies throughout the world, performing image processing and interpretation of LANDSAT satellite data for the purpose of natural resource exploration. We have been a pioneering, value-added remote sensing firm that, until 1986, had performed less than 2 % of its services for governments of any kind. We are still classified as a small business. Because I had foreseen a down-turn in petroleum and mineral exploration, I started trying to diversify GeoSpectra's markets into image processing software sales and services for aerospace companies and Department of Defense agencies as early as August, 1984.

In the spring of 1985, the Michigan Dept. of Commerce encouraged our company to attend Small Business Day at the Redstone Arsenal in Huntsville, Alabama as part of a contingent of about 15 or 20 small companies from Michigan and Indiana that were trying to attract D.O.D. business. Our marketing V.P. and I were in Huntsville for two days, the first spent hearing briefings from various laboratories and agencies at Redstone and the second spent visiting scientific personnel at several of the laboratories about which we had been briefed on the first day. We met with Dr. Francis Kline, a deputy lab director of the Army Missile and Space Intelligence Center (MSIC). He was impressed with the GeoSpectra images that we showed him, particularly our spectral ratio images. I invented spectral ratio images in 1970 as a researcher at the University of Michigan's Willow Run Laboratories, where two years later I became a Principal Investigator on both LANDSAT I and Skylab, under contract to NASA. Ratio imaging for geological remote sensing had been the topic of my Ph.D. thesis at the University of Michigan in 1973. Consequently, GeoSpectra Corporation became the first commercial firm in the world to offer ratio imaging as a service (in 1974), and continued to employ this imaging technique for more than a decade.

Dr. Kline was so impressed with our images that he sent one of his scientists, Mr. Don Slaymaker, to visit GeoSpectra about a month or two later. Mr. Slaymaker so liked our image processing skills that he suggested that his laboratory might be interested in receiving an unsolicited proposal (with no guarantees that it would be funded) from GeoSpectra on the subject of automatically classifying 8 or 9 terrain types, using our spectral ratioing methods for extending the spectral "signatures" of these terrain types to other LANDSAT frames (a frame covers a region of 115 miles by 115 miles in area) collected at different times and at different locations around the world. He suggested that because of our unique methods, we might be eligible for sole sourcing on this subject. He told us that their lab had funded the NASA Marshall Space Center at the level of approximately $100,000 a year earlier to perform similar automatic terrain classifications with LANDSAT data, but NASA had not performed according to expectations and had not employed spectral ratioing as a preprocessing step to the automatic classification. During the summer of 1985, GeoSpectra submitted an unsolicited proposal on this subject, using spectral ratioing and principle components processing to accomplish the automatic classifications that they sought. We requested that the unsolicited proposal be treated as GeoSpectra proprietary data.

In early autumn, 1985, Mr. Slaymaker called to tell us that they could not do sole sourcing after all, but that they would get out a request for proposals (RFP) on this subject in the 1986 fiscal year, which ran from October 1, 1985 through September 30, 1986. On June 2, 1986, Mr. Slaymaker called our marketing V.P. (Mr. Peter Pleitner) to say that an RFP would be issued in a week or so that "would look familiar to us." He said that at least two bids would have to be received from two qualified sources for the RFP to be funded. On July 18, 1986, we received the RFP, with a statement of work that was dated April 14, 1986. A part of the statement of work was classified "SECRET"; GeoSpectra has a facility clearance to the "SECRET" classification level. The proposals were due on August 18, 1986, and we submitted our proposal on August 15. The statement of work was very similar to our unsolicited proposal.

On September 2, Mr. Slaymaker again called our marketing V.P. and said that their pricing people needed to verify our prices, probably a simple step, but the verification had to be done by September 5, 1986 to beat the fiscal year-end deadline. He confirmed that two qualified sources had bid the contract. On September 3, Donna Camp, an accountant employee at Redstone Arsenal, called our Marketing V.P. to tell us that she had requested a DCAA audit of our RFP from the Detroit accounting office and were told that Redstone could not expect an audit report until mid-October. Therefore, she asked for some simple information that we had charged others similar prices for similar work. We also informed her that we had been audited by Judith Parsons of the Detroit accounting office in July, 1986 for a small $49,000 contract that we had performed for another Army organization at Redstone, but Ms. Camp said that the record of that audit had not made it into their computer records as yet. Our marketing V.P. immediately called Judith Parsons and requested an urgent audit, to which she responded by saying that she would be at

GeoSpectra the next day for an audit, so that we could meet the deadline. Our V.P. then called Donna Camp at Redstone the same day, September 3, to tell her that Judith Parsons would perform the audit on September 4. She said that was great news and could not believe that Detroit had responded so quickly.

On September 4, Judith Parsons completed the audit, which we passed. She was able to do it quickly because she had audited us successfully just two months earlier. On September 5, Ms. Parsons called Ms Camp at Redstone and confirmed that we had passed our audit for this RFP, although she could not finish her written report for mailing to Redstone until September 9, which she did. We relaxed and thought that we had a new contract.

On September 15,1986, Mr. Slaymaker called our V.P. to say that he had had to co-sign papers which canceled the RFP because we could not be audited in time for the year-end money. He was surprised to learn that we had passed our audit in time for the September 5 deadline, saying that he had not been told of that fact by anyone. He said that Pete Kirkland had sent the year-end money to Los Alamos with a somewhat different statement of work, with the recommendation that GeoSpectra consult on the work. Mr. Slaymaker suggested that he might be able to sole-source the work to GeoSpectra in the 1987 fiscal year, since we had won the previous competition and the audit was good for 24 months. He also said that we were technically superior to the other proposal and that our price (approximately $146,000 for the proposed effort, plus about $30,000 for optional software purchases) was so low that he had wanted to get the optional software, too. We still had hopes that we would get the contract either through Los Alamos or directly from Redstone Arsenal in the new fiscal year.

On October 17, 1986, I got a call from Mike Cannon of Los Alamos who started the call with "we have received the money to do what you proposed, even though we have not seen your proposal or written a proposal to Peter Kirkland yet." He asked if I could visit him for one day, for which they would pay GeoSpectra $1,300, which included travel expenses and consulting fee. He also asked me to bring a copy of our proposal. I was elated, thinking that this was how we were to get our contract funded.

I visited Mike Cannon and Jim White at Los Alamos on October 27, 1986. For the entire morning, I participated in technical discussions fully, telling them what our approach was to this automatic classification task, which sounded the same as the one on which we had proposed. He told me that they had Cray supercomputers at Los Alamos, but that most of their image processing was done on a DEC Vax computer with an array processor and an Optronics Photowrite system for an output device. I remarked that their computer set-up for image processing was almost identical to GeoSpectra's. I also said that GeoSpectra had access to a Cray simulator at the University of Michigan (also in Ann Arbor) for software development. It was not until lunch time that the bombshell hit. When I asked when GeoSpectra might come under contract to Los Alamos, Mike Cannon said that that one day of consulting might be all that GeoSpectra gets of this project. I was angry and dismayed. When I asked how he could in good conscience take bread from our mouths for something that had been our idea and for which we had written two proposals to their none, he replied that Los Alamos had to act like a business and obtain contracts to support their jobs there. Mike Cannon asked how much our proposal had been for, and I said about $186,000 if all the options were accepted. Then I asked how much money that they had gotten, he said that it had been $300,000. I asked why it was so high, and Jim White said that the overhead at Los Alamos was so high that they charged about $216,000 per man year for Mike Cannon's time. I replied that I was the most expensive employee at GeoSpectra, with a Ph.D. and pioneer status in remote sensing, and we charge only $120,000 per year for my time. GeoSpectra's head researcher, a physics Ph.D. from Princeton, is charged out at less than I am for a man-year. I have more years (21) of experience in remote sensing than Cannon and White combined and, after approximately 60 technical publications, probably have published more on remote sensing than the two of them combined.

I returned home, took all our paper history of this episode to Sen. Carl Levin's staff in Washington, D.C., and they began investigating immediately. In late 1986, Pete Kirkland called to explain proudly that he had no industry contracts in his section. All work funded by him was performed either in-house or through national labs with contracts that he did not have to monitor. In early 1987, Pete Kirkland called to say that I would be invited to a meeting with Los Alamos people in late February or early March to hear how they planned to proceed with the work. I would have to pay for my own expenses, he said , but this should put GeoSpectra in a good position when they decided to go operational with the processing, once the research was done. He did not explain why they wanted to have the software put on one of their supercomputers if they were planning to have the operational work done by a contractor out-of-house. I expressed interest in attending, but to this day have received no further calls or letters about this subject.

In summary, it appears that a contract based on a technical idea submitted to MSIC by a qualified high tech company was deliberately guided to a non-profit national laboratory, even though the latter charged 60% more and had less expertise in the required technology than the company, which was also the low-bid respondent to an earlier request for proposal on the same subject.

I believe that this history of a lost contract has lessons to be learned that go beyond the unfair, shabby treatment of my company in this specific case. I believe that it demonstrates the unfair advantage of non-profit national laboratories and the much greater obstacles that businesses, large or small, must hurdle to gain a government contract. Government bureaucrats that wish to take the path of least resistance will choose a national lab to fund instead of a business, regardless of cost or technical qualifications, because it requires less work for the bureaucrat. In my opinion, the relative ease with which a national lab can be contracted, compared with industry contractors, is especially dangerous to the national security because it so strongly discourages American high tech companies that have been successful in the commercial world from doing business with the Department of Defense. With so many D.O.D. research contracts going to non-profit national labs, American high tech companies will be undernourished for research funds, which will lead to even greater problems with respect to our country's competition in the world economy. Unlike high tech companies, non-profit national labs are black holes for research funds, with little to show by way of new commercial products that result in large world markets for American technology.

For these reasons, I recommend that the role of American high tech companies be increased at the expense of non-profit national laboratories with regard to federal research funds. National defense research becomes far more expensive when it fails to stimulate the creation of new commercial products.

Senator LEVIN. Thank you, Doctor.

One of the arguments that the Army is making is that the proposal that you submitted was priced unrealistically low, because you underestimated the number of computer hours needed to develop the computer program.

Two questions. One, did you ever hear that from the Army? And, two, is it true?

Dr. VINCENT. Number one, sir, no, I never heard that from the Army. Number two, it is absolutely false. The reason it is false is because we have worked for 13 years on the software packages that we use to do image processing. The difference between us and what goes on in a Federal laboratory is that our programs are not written once for a research task, they are written 10 times. We offer services from that data processing.

So our processing is much more efficient than theirs and, hence, the cost is lower. With thinking like that it is indeed difficult to save money for our Government.

Senator LEVIN. What was the amount of your proposal? Was it exactly $200,000?

Dr. VINCENT. No, it wasn't. We had two parts. The main part of the proposal was $138,000. Then we had about $48,000 worth of options, so that the total amount was $186,000. I learned while I was at Los Alamos—they asked what my proposal cost, and I said I would tell them if they told me how much they got—that Los Alamos had gotten $300,000.

Senator LEVIN. Yours was $186,000?

Dr. VINCENT. Yes, sir.

Senator LEVIN. For those of you who aren't too familiar with DOD sums, the DOD usually doesn't deal in hundreds of thousands of dollars, so $186,000 is a relatively small sum in terms of the defense budget. But there is a huge percentage difference and that is the critical issue—the huge differential. At least one of the critical issues here is the huge differential between what the Army sent to Los Alamos unsolicited, $300,000, and what you would have charged them which was $186,000. That's 50 percent more than what you would have charged, so the Government got socked for something like 50 to 60 percent more money on this contract than they should have been.

When was the first time you ever heard the suggestion that you had underestimated the number of computer hours on your proposal?

Dr. VINCENT. I think it was last Friday when a member of your staff told me that that had occurred.

Senator LEVIN. The Army has indicated to us that they want Los Alamos to see which of the following four methods could best be used in the computer analysis of satellite photos: Clustering, ratioing, a combination of clustering and ratioing, and artificial intelligence. So there are four methods.

Did your proposal use clustering?

Dr. VINCENT. Yes, sir, it did.

Senator LEVIN. Ratioing?

Dr. VINCENT. Yes, sir.

Senator LEVIN. A combination of the two?

Dr. VINCENT. Yes, sir, it did.

Senator LEVIN. Artificial intelligence?

Dr. VINCENT. Yes, it did.

Senator LEVIN. Did the Army ever tell you it wanted you to survey all four of those techniques?

Dr. VINCENT. Yes, but informally. Those four techniques were not mentioned in the statement of work per se, but informally we—well, we had suggested that when Mr. Slaymaker was at our office. We had suggested in our unsolicited proposal. I guess I had suggested it to them and then they suggested it back to me.

Senator LEVIN. Los Alamos has several super computers. GeoSpectra, as I understand it, does not. Can you tell us whether or not Los Alamos is more qualified to do the photography work because there are super computers at Los Alamos?

Dr. VINCENT. Senator, when I was there they showed me their image processing facility. It was virtually identical to GeoSpectra's. It was a DEC VAX computer, with an Optronics Photo-Write system. We have both of those and a lot of disc space. They had an array processor that we—well, we have a different kind of array processor. We have a parallel processor and they had a different one.

They did tell me that they had Cray computers there, but that they rarely used it for image processing. I would like to point out one other thing. The statement of work called for putting this up on a (CDC), Control Data Corp. Cyber 170. When I was at Los Alamos I didn't learn of any CDC computer there.

We were planning on putting it up on a CDC for them on their facilities—at their facilities in Huntsville.

Senator Levin. I understand, Dr. Vincent, that GeoSpectra has existing software which would have helped do the photography analysis. Do you know whether Los Alamos had either that or similar software?

Dr. VINCENT. Well, sir, I know that they have some image processing software. When I was there they were working on a clustering algorithm program, and they showed me that they could do a ratio image, but I was not convinced that they were correcting for atmospheric haze correctly before making the ratio.

I am confident that our programs were superior to what I saw there from an efficiency standpoint, and possibly also from a scientific standpoint.

Senator LEVIN. Are you able to compare the qualifications and the experience of the persons at Los Alamos to those of your staff at GeoSpectra who have done imaging work?

Dr. VINCENT. Well, sir, I saw about a half dozen people there. At GeoSpectra we have 17 people in image processing. That is a lot for image processing because it is a highly computer intensive thing. I did not learn much about their qualifications except that I know they have published at least a few papers. Jim White, I think, has only been doing processing a few years, 3 or 4. I've got people that have had years and years of experience.

Besides my 21 years of experience we have Terry Lehman, one of our middle managers, that was the head of remote sensing and computer research at Atlantic Richfield before we hired him. Before that he was head of remote sensing at Cities Service. Even my marketing vice president has a master's degree in remote sensing from the University of Michigan, and my head of research has a Ph.D. from Princeton in astrophysics.

Senator LEVIN. Your proposal is a lot more specific in many ways than the written proposal which was worked out with Los Alamos many months later—I think 3 months later. There is finally a 2 page draft of the proposal from Los Alamos. I want to ask you about the specifics in your contract proposal—as to whether or not they are relevant and useful or should be useful to the Army.

Your proposal promises to provide computer programs which can categorize terrain in all seasons and can be used on photos other than LANDSAT photos. The Los Alamos proposal makes neither promise. Is that a significant commitment to the Army?

Dr. VINCENT. It is significant because that was one of our cost items in there. We had to do this in such a way that it would be compatible with aircraft data which, if it is a multi-spectral scanner, could have 19 or 20 channels, not just 4 or 7.

Senator LEVIN. Your proposal promises to analyze the Army's equipment—MSIC's equipment—and suggest needed improvements. The Los Alamos proposal made no such promise. Is that significant?

Dr. VINCENT. That is very significant because part of our cost was for going down there and analyzing their equipment. We had to train our people on the CDC Cyber, which my people were not very familiar with. The fact that Cray computers exist at Los Alamos would not, I think, help them at all with the CDC Cyber translation of software.

Senator LEVIN. The GeoSpectra proposal has timetables showing how it intends to proceed and how long each task should take. The Los Alamos proposal says only the effort will take 16 man-months. Do you view that as being relevant?

Dr. VINCENT. Yes, sir. I just wish I could write such simple proposals that would be accepted. I think that their effort of 16 man-months is not going to get them anywhere near the end of the job and they are going to have to ask for an extension.

Senator LEVIN. The GeoSpectra proposal promises monthly cost, performance, and scientific reports as well as a final report on the research project. The Los Alamos proposal makes no such promises for reports.

Dr. VINCENT. That is an important cost item, and if you cut those out, I guess I can see how they are going to squeeze their $216,000 a man-year out for guys like Mike Cannon by showing less man-years and less monthly reporting.

Senator LEVIN. The Los Alamos proposal will integrate its photo data with DTED, which means Digital—you know——

Dr. VINCENT. Digital Terrain Elevation Data.

Senator LEVIN. Let me repeat that. Digital Terrain Elevation Data. The Los Alamos proposal will integrate its photo data with those particular kinds of maps, those DTED maps. I understand that GeoSpectra intended to integrate its data with a self-created program which is superior to DTED. Would you comment on that?

Dr. VINCENT. Yes, Senator. I am glad you asked about that. We have a unique capability in the world, not just versus Los Alamos, of creating high density DTEDs. We are very proud of this. We developed the capability without $1 of Government funding, which has been kind of difficult for us to sell to the Government because of that.

Notwithstanding, we have created a new technology that I don't believe those people at Los Alamos could create or would create if you gave them 100 years. This is a very important element—it is a computer file of elevation data, and if you can have your photographic data co-registered or perfectly overlain with elevation data, then you can do simulations. You can look at a scene from many different angles. I've got an example in my briefcase if you would like to see it later.

Senator LEVIN. In a nutshell, would you say then that the program which you have created you believe to be superior to and an advancement of the DTED program?

Dr. VINCENT. Clearly. ATOM, Automatic Topographic Mapper, is the name of the software package. We were going to create DTEDs in this case that had 2 meter postings. That means that there would be an elevation data point every 2 meters on the ground.

The DTEDs that are easily available from the Defense Mapping Agency—that I believe they were going to use have 100 meter postings. So that means we were going to that 50 times more data points in one direction. That is 2,500 times more elevation data points on ours per square mile than theirs. I would say ours is 2,500 times better.

Senator LEVIN. Your proposal promised to verify the accuracy of your computer program using aerial photos of actual terrain. The Los Alamos proposal promised to verify its data with ground truth data that "shall be available from other sources." Is there a significant difference there?

Dr. VINCENT. Yes. We had originally in our unsolicited proposal talked about going out and collecting ground truth data, but Don Slaymaker had thought that would be more expensive than using other means, so we used aerial photography. Actually, that was a cost savings on our part instead of sending guys into the field.

However, that means we always had the data there. We didn't have to worry about missing something one time and going back. We had done that in response to what we thought the customer wanted.

Senator LEVIN. Finally, your proposal promised software documentation and manuals in accordance with DOD standards, and the Los Alamos proposal promised only technical and user documentation. Is there any difference there?

Dr. VINCENT. Oh, gee, that is daylight and dark. That is like saying I am going to sell you a new computer and not give you the manual. I mean, how could you even do word processing?

Well, I guess it is not quite like that, but the point is you could use it, but if anything ever went wrong with it, only the people who invented it could ever fix it. So the documentation that we were going to do would enable people to know it well enough to be able to do some fixing up on it.

Senator LEVIN. I have no additional questions at this time. Other members of this subcommittee may have questions for you for the record, so we may be submitting questions to you for written answers if that would be all right. You are free to stay, and if you do, we may have some questions later on in the morning.

There is one additional question that I would like to ask you before you leave us. It is my understanding that Los Alamos was not required to submit a written proposal to do the project prior to receiving authorization to do the job. Is that unusual for a research project?

Dr. VINCENT. It certainly is, particularly for business. I have never known a business to get one without writing a proposal. It cost $30,000 for us to write those two proposals.

Senator LEVIN. Thank you, Doctor.

We now have a panel of witnesses from the Army and the Department of Energy. From the Department of Energy, we have Mr. Harry Peebles, who is the Principal Deputy Assistant Secretary for Management and Administration, and we have Mr. Berton Roth, who is the Director of Procurement and Assistance Management Directorate.

We have from the Army Dr. Glen Priddy, who is the Director of the U.S. Army Missile and Space Intelligence Center, Redstone Arsenal, AL; and Dr. Louis Cameron, who is the Director of Army Research and Technology.

We thank all you gentlemen for being with us. We appreciate your being here. I want to make sure we have you all identified correctly. Why don't we start with Dr. Priddy.

STATEMENT OF DR. ROBERT G. PRIDDY, DIRECTOR, U.S. ARMY MISSILE AND SPACE INTELLIGENCE CENTER (MSIC), REDSTONE ARSENAL, HUNTSVILLE, AL, ACCOMPANIED BY DR. LOUIS M. CAMERON, DIRECTOR, ARMY RESEARCH AND TECHNOLOGY, PENTAGON, WASHINGTON, DC

Dr. PRIDDY. Good morning, sir. I am Glen Priddy. I am the Director of the Army Missile and Space Intelligence Center located in Huntsville, AL. The Missile and Space Intelligence Center, or MSIC, has the responsibility to help improve the survivability and reduce the cost of U.S. weapons by assessing the capabilities, limitations, and vulnerabilities of the foreign missile threat. This includes support to urgent near real-time military operations such as last year's Libyan raids. It also includes support to major materiel weapons decisions.

Modeling and simulation are critical and essential tools used in the assessment process. The MSIC concept is to build comprehensive models and simulations of the foreign weapons and terrain in order to accurately predict the weapon's performance in realistic combat situations. The basic MSIC intelligence mission is funded solely by operation and maintenance dollars.

Since 1978, joint MSIC and R&D experiments have shown that terrain and vegetation are significant factors in the performance and effectiveness of foreign missile systems in battle situations.

This is particularly important in the survivability of U.S. weapons such as cruise missiles, helicopters, low-flying bombers, and tanks. This project we are referring to today is to build an accurate terrain model. The project will include a computer technique to analyze LANDSAT data, automatically classify the type of vegetations at specific locations on the Earth and overlay it with Defense

Mapping Agency data to get an accurate description of terrain characteristics.

The results will be used as inputs to the integrated missile and simulations to predict how terrain affects the performance of foreign Surface to Air Missiles, or SAMs.

Such a simulation has great value for tacticians planning to penetrate foreign SAM defenses in the Middle East and other parts of the world. The total amount of this effort is $300,000 funded solely with OMA dollars.

This project is a research and development type effort to determine the best method of automatic classification of land cover and related features. There are at least four methods that could be used, clustering, ratioing, a combination of the two, and artificial intelligence.

Los Alamos is to evaluate all the known methods and any others that may be identified during the evaluation process. Los Alamos will make a recommendation as to the best approach and then implement that approach on MSIC's computer.

In July 1986, MSIC and the U.S. Army Missile Command, or MICOM, procurement office issues a request for proposal to Geo-Spectra Corp. and the Georgia Tech Research Institute. The Geo-Spectra Corp. proposal was not technically acceptable because it was determined that inadequate computer time was being proposed. However, this was to be a point for negotiations before best and final offers.

On September 4, 1986, the MICOM contracting officer notified MSIC that the contract award cannot be made by September 30, 1986, because the DCAA audit report would not be compiled until the first week of October.

Senator LEVIN. What was the date of that?

Dr. PRIDDY. That was September 4, 1986. These funds would expire on September 30, 1986, and would be lost to the MSIC project.

MSIC has an extremely critical and complex job to perform with limited personnel and limited funds. MSIC must make the most of every dollar. Therefore, there was no alternative in this case but to cancel the procurement action and find an alternate means for meeting this urgent analytical requirement.

As a result of MSIC's previous experience with digital imaging processing and super computer experts at Los Alamos, Mr. Ed Wynn, my Chief of Scientific Calculations and Simulations, directed the MSIC project engineer to interview a team of engineers at Los Alamos and explore the possibility of a joint effort. The engineering skills, related experience, and computational assets at Los Alamos were very impressive.

In September 1986, we reached an agreement with Los Alamos as to the size, scope, general tasking, personnel assignments, and computer resources that would be necessary to successfully complete the project. It was also agreed that during the first phase of the project a more detailed scope of work would be developed.

On September 12, 1986, a MIPR for $300,000 was forwarded to DOE under the authority granted under 41 U.S. Code 23, the Project Order Act. This MIPR was accepted by DOE on September 24, 1986. This initiated the joint project.

In October and November 1986, a more detailed scope of work was developed as part of the first phase of the project. The project is currently proceeding on schedule and with a high degree of optimism for success.

The joint MSIC/Los Alamos project has several advantages over the project defined in the original RFP and the contractor's approaches. The project could be expanded to include the best of several techniques rather than just one technique. Several alternate methods could be explored. New insights into the phenomena associated with the use of LANDSAT-type data are likely to emerge due to computer and personnel limits on one approach will be explored by the contractor.

The MSIC and Los Alamos team will have access to the vast scientific and engineering expertise available at Los Alamos. Only a few skilled people are available from the contractor.

The MISC and Los Alamos team will have access to the extensive computational capabilities at Los Alamos to explore and evaluate new concepts. Limited computer resources are available from the contractor which would limit the techniques that could be explored.

The Los Alamos project engineer is cleared for sensitive compartmented information, or SCI, and is skilled in the use of related intelligence data, data types and processors. The contract personnel are not cleared for SCI material. Integration at the MSIC facility would have resulted in loss of productivity due to SCI data security restrictions.

In retrospect, this research and development effort is probably too large and complex for either of the potential contractors. Fallout and side analytical benefits resulting from the extensive skills and computational resources available at Los Alamos could even overshadow the original idea.

Los Alamos is the best location for this research and development of this technique. Small business firms and other contractors may be able to use the resulting techniques to support production type requirements. Controls exist to ensure a fair price and acceptable quality of work that are similar to those controls used for most R&D type projects.

The MSIC project engineer and monitor assigned to this effort is skilled in modeling a simulation of weapon systems. He has been actively involved with manual and semi-automatic methods of terrain modeling and LANDSAT classification for the past 4 years. He knows what needs to be done and he is working closely with the Los Alamos team to ensure the Army's needs are met.

The typical progress reports and in-progress reviews are being conducted. MSIC has a commitment to honesty and excellence in the intelligence, analysis, and production process. Small business firms play a major role in MSIC intelligence, analysis, and production processes. In fact, more than 40 percent of the firms that MSIC is currently doing business with are small business firms, and in the past 6 years the percentage of the MSIC budget, contract budget, that has gone to small business firms has varied between 19 percent and 41 percent, averaging 30 percent per year during those past 6 years.

Senator Levin, I thank you for the opportunity to tell the story of this contract.

[The prepared statement of Dr. Priddy follows:]

STATEMENT
OF
DR. ROBERT G. PRIDDY
DIRECTOR
U.S. ARMY MISSILE AND SPACE INTELLIGENCE CENTER (MSIC)
REDSTONE ARSENAL, ALABAMA
BEFORE THE
SUBCOMMITTEE ON INNOVATION, TECHNOLOGY, AND PRODUCTIVITY
OF THE
SENATE SMALL BUSINESS COMMITTEE
APRIL 7, 1987

MSIC has the responsibility to help improve the survivability and reduce the cost of U.S. weapons by assessing the capabilities, limitations, and vulnerabilities of the foreign missile threat. This includes support to urgent, near-real-time military operations such as the Libyan raids and support to major materiel development decisions.

Modeling and simulation are critical and essential tools used in the assessment process. The MSIC concept is to build comprehensive models and simulations of the foreign weapons and terrain in order to accurately predict the weapons' performances in realistic combat situations. The MSIC intelligence mission is funded solely with operation and maintenance dollars.

Since 1978, joint MSIC and R&D experiments have shown that terrain and vegetation are significant factors in the performance and effectiveness of foreign missile systems in low-altitude battle situations. This is particularly important in the survivability of U.S. weapons such as cruise missiles, helicopters, low-flying bombers, and tanks.

This project is to build an accurate terrain model. The project will include a computer technique to analyze LANDSAT data, automatically classify the type of vegetation at specific locations on the earth, and overlay it with Defense Mapping Agency (DMA) data to get an accurate description of terrain characteristics. The results will be used as inputs to the integrated missile and radar simulations to predict how terrain affects the performance of foreign surface-to-air missiles (SAMs). Such a simulation has great value for tacticians planning to penetrate foreign SAM defenses in the Middle East, etc. The total amount of this effort is $300,000, funded solely with OMA dollars.

This project is a research-and-development-type effort to determine the best method of automatic classification of land cover and related features. There are at least four methods that could be used:

a. Clustering;

b. Ratioing;

c. Combination of a and b;

d. Artificial Intelligence (AI).

Los Alamos is to evaluate all the known methods and any others that may be identified during the evaluation process. Los Alamos will make a recommendation as to the best approach and then implement it on MSIC's computer.

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The joint MSIC/Los Alamos project has several advantages over the project defined in the original RFP and the contractor approach.

a. The project could be expanded to include the best of several techniques rather than just one technique.

b. Several alternate methods could be explored. New insights into the phenomena asociated with the use of LANDSAT-type data are likely to emerge. (Due to computer and personnel limits, only one approach would be explored by the contractor.)

c. The MSIC and Los Alamos team will have access to the vast scientific and engineering expertise available at Los Alamos. (Only a few skilled people are available from the contractor.)

d. The MSIC and Los Alamos team will have access to the vast computational capabilities at Los Alamos to explore and evaluate new concepts. (Limited computer resources are available from the contractor which would limit the techniques that could be explored.)

[illegible]. The Los Alamos project engineer is cleared for SENSITIVE COMPARTMENTED INFORMATION (SCI) and is skilled in the use of related intelligence data types and processors. (The contractor personnel are not cleared for SCI material. Integration at the MSIC facility would have resulted in loss of productivity due to SCI data security restrictions.)

In retrospect, this research and development effort is probably too large and complex for either of the potential contractors. Fallout and side analytical benefits resulting from the extensive skills and computational resources available at Los Alamos could even overshadow the original idea. Los Alamos is the best location for the research and development of this technique. Small business firms and other contractors may be able to use the resulting techniques to support production-type requirements.

Controls exist to ensure a fair price and acceptable quality of work that are similar to those controls used for most R&D-type projects. The MSIC project engineer and monitor assigned to this effort is skilled in modeling and simulation of weapons systems. He has been actively involved with the manual and semiautomatic methods of terrain modeling and LANDSAT classification for the past 4 years. He knows what needs to be done and is working closely with the Los Alamos team to ensure the Army's needs are met. The typical progress reports and In Progress Reviews are being conducted.

MSIC has a commitment to honesty and excellence in intelligence analysis and production process. Small business firms play a major role in the MSIC intelligence analysis and production process. In fact, more than 40 percent of the firms MSIC is currently doing business with are small business firms and the percentage of the MSIC contract budget awarded to small businesses in the past 6 years has varied between 19 percent and 41 percent, averaging about 30 percent per year.

I thank you for this opportunity to tell the story of this contract.

Senator LEVIN. I think, Mr. Peebles, we are going to turn to you at this point.

STATEMENT OF HARRY L. PEEBLES, PRINCIPAL DEPUTY ASSISTANT SECRETARY, MANAGEMENT AND ADMINISTRATION, DEPARTMENT OF ENERGY, WASHINGTON, DC, ACCOMPANIED BY BERTON J. ROTH, DIRECTOR, PROCUREMENT AND ASSISTANCE MANAGEMENT DIRECTORATE, DEPARTMENT OF ENERGY, WASHINGTON, DC

Mr. PEEBLES. With your permission I would like to provide an oral summary and submit the written statement for the record.

Senator LEVIN. Not only do you have our permission but our gratitude.

Mr. PEEBLES. Mr. Chairman, I appreciate the opportunity to appear before you today to talk about the work of the national laboratories within the Department of Energy.

As you have recognized, with me today is Mr. Berton Roth. He is the Director, Procurement and Assistance Management Directorate.

With your indulgence I would like to provide some historical perspective of the work that we do for other departments and agencies, and to begin I will select the point in time of the Manhattan Engineer District, during World War II, where we marshaled the most competent scientific minds, academic institutions, and industrial corporations available to work with the civilian and military forces of the U.S. Government. The purpose was to develop untried scientific theory into useful technology for the defense of the Country.

After the war, Congress established the Atomic Energy Commission and significantly broadened the scope of the new agency to explore ways to use this new power source and encouraged the Commission to perform work for others.

Those missions have been further supplemented with the organizational evolution from the Atomic Energy Commission through the Energy Research and Development Administration, and finally to the Department of Energy.

Today the Department has a very broad range of scientific energy, and health and safety responsibilities. DOE's scientific capability, and unique facilities built up over the past 45 years, permits us to support and find uses for technologies developed in these facilities.

The recognition of the vital functions performed by the laboratories has resulted in Congress designating them as national laboratories.

Most agreements to do work for other Government agencies fall under the Economy Act of 1932, which authorizes agencies to place orders for goods and services subject to availability, with another Government agency. In addition, the Department accepts work from other entities under the authority of the Atomic Energy Act of 1954, the Intergovernmental Cooperation Act of 1968, the Energy Reorganization Act of 1974, the Stevenson-Wydler Technology Innovation Act of 1980, and the Department of Energy Organization Act of 1977.

The desire to maintain this capability has resulted in the need to provide a delicate balance between performing work for other agencies or the public in our facilities that would result in economy to the taxpayer, scientific advancement to the Nation, and not competing with the private sector.

Since their beginning we have had management controls at the national laboratories that we believe best achieve this balance. These controls are partially based on statutes, but mostly on policy decisions.

The Atomic Energy Commission, in response to the Economy Act of 1932 requirements, introduced the first series of controls by limiting such work to cases where the proposed work would not result in increases in the size of the staff; the proposed work would not require additions of new facilities or modifications to existing facilities solely to accommodate that work; and the Government agency requesting such work had to determine that the work could not be as conveniently or more cheaply performed by private industry.

The Department has continued to be sensitive to the work it does for others and closely monitors these activities. Most recently, in the fall of 1985, the Under Secretary of Energy directed that we reexamine our processes for performing work for others.

We looked at our management processes to assure that work performed for others clearly relates to the mission of the Department, requires the highly specialized research capabilities of the laboratories, and is consistent with applicable laws, regulations and departmental policies.

As a result, we issued on December 19, 1986, a revised order, copies of which have been provided to your staff, entitled Non-Department of Energy Funded Work. Significant changes in this revised order included written determination by the responsible contracting officer to make certain assurances: That written statements are provided by the proponent or requesting agency to make certain assurances to DOE; that approval by the cognizant secretarial officer is made for construction projects; that there is an assigned limit and approval of the amount of non-DOE funded work to be performed at each facility. In addition, annual reporting to the headquarters and periodic reporting is required by the headquarters to make assessments of the performance of work for others. It also provides for oversight and appraisal and evaluation by headquarters and field staff.

I believe that these changes, Mr. Chairman, when they are fully implemented, will improve control of work for other processes, as well as provide assurances that the proposed work will be mission related and appropriate for our performance.

May I now briefly address the issues and questions that you raised in your letter inviting us to testify.

First, with regard to the Economy Act and the Project Order Act: Under the provisions of the Economy Act, the head of the requesting agency may place an order with another agency if certain determinations are made.

For the task in question, DOE accepted the work under the Economy Act assuming that a proper determination was made by the Army. Our recently issued Order, to which I referred earlier, will henceforth require that a written certification be provided to DOE to that effect.

With regard to the Project Order Act, the Department complies by treating interdepartment orders as obligations against appropriations. So we feel that we have complied with the provisions of that Act.

As to consistency with mission, which was another question that you had asked us to respond to, DOE insures that the work authorized is consistent with the laboratory mission and does not interfere with DOE work. We do this by evaluating the task statement with respect to the work performed at the laboratory.

In response to the questions on compliance with regulations, DOE accepted the work with the understanding that the requesting agency had made the necessary determinations with regard to competitive procurement regulations and end-of-year spending. If there had been reason to suspect otherwise, the Department would have reviewed the matter with the requesting agency.

Finally, in response to the rest of the questions, Mr. Chairman, DOE was not aware on September 24, 1986 of any efforts made by the Army to place this work under contract with a private firm.

Senator LEVIN. Would you repeat that?

Mr. PEEBLES. DOE was not aware on September 24 of any efforts made by the Army to place this work under contract with a private firm during fiscal year 1986.

Senate LEVIN. In other words, you were not aware as of September 24, 1986, of all of the efforts that had been made relative to private firms?

Mr. PEEBLES. That is correct.

Senator LEVIN. Did you ask?

Mr. PEEBLES. No, sir, we did not ask. As far as I can ascertain we did not ask that question. We were aware of the scope of the work as it was described in the Military Interdepartmental Purchase Request, and as supplemented by discussions that had taken place between the scientists at Los Alamos and the scientists at Redstone.

The Army estimated the cost of this work to be $300,000 and wanted the work to be accomplished by the end of fiscal year 1987.

The laboratory was interested in this work since it related to work that we were already doing and believed that they could meet the Army's needs within the dollar and time constraints.

The cognizant DOE contracting officer, the Director of Energy and Technologies Division, reviewed the subject project and approved it as suitable work for the laboratory and authorized its acceptance by DOE.

In conclusion, Mr. Chairman, I would like to state that we feel that we have the requisite controls and management tools in place. I think it is incumbent upon us to be ever diligent to make sure that these tools are being used properly, and that our requirements are being implemented as they should be.

[The prepared statement of Mr. Peebles follows:]

STATEMENT OF

HARRY L. PEEBLES

PRINCIPAL DEPUTY ASSISTANT SECRETARY, MANAGEMENT AND ADMINISTRATION

DEPARTMENT OF ENERGY

BEFORE THE

SUBCOMMITTEE ON INNOVATION, TECHNOLOGY AND PRODUCTIVITY

COMMITTEE ON SMALL BUSINESS

UNITED STATES SENATE

APRIL 7, 1987

Statement of Harry L. Peebles
Principal Deputy Assistant Secretary for Management and Administration
Department of Energy
Subcommittee on Innovation, Technology and Productivity
Committee on Small Business

Mr. Chairman, and Members of the Subcommittee, I appreciate the opportunity to appear before you today to discuss the work of the National Laboratories within the Department of Energy (DOE).

With me today is Berton J. Roth, Director of Procurement and Assistance Management.

To begin, I would like to provide some background and historical perspective of the work we do for other departments and agencies. This part of our mission has its roots in the Manhattan Engineering District, the Atomic Energy Commission, and the Energy Research and Development Administration.

BACKGROUND

The history of the DOE laboratories begins with the Manhattan Engineering District in World War II and the marshalling of the most competent scientific minds, academic institutions, and industrial corporations available to work with the civilian and military forces of the U.S. Government. The purpose was to develop untried scientific theory into useful technology for the defense of the country.

After the war, Congress, realizing the potential in keeping intact this unique arrangement for the purpose of scientific advancement, formed the Atomic Energy Commission (AEC) by enacting the Atomic Energy Act of 1946. The Act significantly broadened the scope of the new agency to explore ways to use this new power source. The Atomic Energy Act of 1954 (which superseded the Atomic Energy Act of 1946) encouraged the Commission to perform work for others.

Today, the Department has a broad range of scientific, energy, and health/safety responsibilities. DOE's scientific capability and unique facilities, built up over the past 45 years, permits us to support and find uses for technologies developed in these facilities. Interaction among the laboratories and industry has resulted in the development of the nuclear power industry, advances in the fields of medical treatment and nuclear physics and development of new materials and testing methods, just to mention a few. The recognition of the vital functions performed by the laboratories has resulted in Congress designating them as "National" laboratories and certain of the facilities have been designated as "User Facilities," i.e., available to the public for use with or without charge.

Most agreements to do work for other Government agencies fall under the Economy Act of 1932. The Act authorizes agencies to place orders for goods and services, subject to availability, with another government agency when the head of the ordering agency determines that it is in the best interest

of the Government to do so. In addition, the Department accepts reimbursable work from other entities where other facilities are inadequate for the purpose, under the authority of the Atomic Energy Act.
The authority of the Department to perform work for others is also found in other statutes. These other authorities include the Intergovernmental Cooperation Act of 1968, 42 USC 4201, et. seq.; the Nuclear Regulatory Commission's authority in Section 205 of the Energy Reorganization Act of 1974, 42 USC 5848; the Stevenson-Wydler Technology Innovation Act of 1980, 15 USC 3701, et. seq.; and Section 649 of the Department of Energy Organization Act, 42 USC 7259.

The desire to maintain this capability has resulted in the need to provide a delicate balance between performing work for other agencies or the public in our facilities that would result in economy to the taxpayer and scientific advancement to the Nation, and not competing with the private sector.

Early in our history, it was determined that introducing management controls at the National laboratories would best achieve this balance. These controls are partially based in statutes, but mostly on policy decisions. The Atomic Energy Act of 1954 permits the performance of work for other "persons" through the use of "Commission" facilities if private facilities are inadequate for the purpose (other "persons" include other Government agencies, State and local governments, non-profit and for-profit organizations).

The AEC's initial policy guidance on the conduct of research and development for other Government agencies in AEC facilities, in response to the Economy Act of 1932 requirements, limited such work to cases where:

1. The proposed work would not result in an increase in the size of AEC or contractor staff.
2. The proposed work would not require additions of new AEC facilities or modifications to existing facilities solely to place AEC in a position to supply or render the requisitioned services.
3. The proposed work could not be subcontracted out except for work for others requisitioned by agencies specifically designated in the Economy Act.
4. The Government agency requesting such work had to determine that the work could not be as conveniently or more cheaply performed by private industry. The receipt of the request would ordinarily be construed to mean that the other agency had made such a determination.

DEPARTMENTAL CONCERNS

The Department continues to be sensitive to the work it does for others and closely monitors these activities. More recently, the Under Secretary of Energy requested a reexamination of the work for others management process and asked for assurances that work performed for others clearly relates to the mission of DOE, requires the highly specialized research capabilities of the laboratories, and is consistent with applicable laws, regulations and Departmental policies. To better provide these assurances, the Department conducted an internal review to evaluate the work for others processes and found that DOE needed to increase Departmentwide sensitivities and operative DOE Orders required more explicit procedures.

DEVELOPMENT AND ISSUANCE OF NEW DOE ORDER

To accomplish this, the Under Secretary directed that the existing Departmental Order establishing DOE policy, responsibilities and procedures for non-DOE funded work be revised to incorporate improved management control of the work for others process. On December 19, 1986, revised DOE Order 4300.2A, NON-DEPARTMENT OF ENERGY FUNDED WORK, was issued. Significant changes in the revised Order include:

- A written determination by the responsible Contracting Officer assuring that the proposed work is consistent with the DOE mission, does not adversely impact programs at the facility, does not place the facility in direct competition with the private sector and will not create a detrimental future burden on commitment of DOE resources.
- A written statement by the proponent or requesting agency assuring that the use of the DOE facility is in compliance with the requirements of the Atomic Energy Act of 1954, as amended, the Economy Act of 1932, as amended, and other applicable laws and regulations.
- Approval by the cognizant Secretarial Officer for construction projects.
- Approval of the amount of non-DOE funded work to be performed at each DOE facility by the cognizant Secretarial Officer, who sets an overall level annually.
- Annual reporting to Headquarters, with a review by the Under Secretary.

These changes will provide improved control of the work for others process as well as provide assurances that the proposed work will be mission related and appropriate for DOE's performance.

COMMENTS ON ISSUES

The following comments are provided with respect to the specific issues you raised concerning the use of the Los Alamos National Laboratory for the development of algorithms for categorization of terrain characteristics requested by the Department of the Army.

Economy Act and Project Order Act

Under the provisions of the Economy Act of 1932, as amended, the head of a requesting agency may place an order with another agency for goods or services required in carrying out the requesting agency's mission, if certain determinations are made, including that the ordered goods or services cannot be provided as conveniently or cheaply by a commercial enterprise. For the task in question, under the previous Departmental Order, DOE accepted the Economy Act determination made by the Army. The recently issued DOE Order 4300.2A dated December 19, 1986, now provides that prior to acceptance of work a written statement is required certifying that the proponent or requesting agency has determined that use of DOE facilities would be in compliance with the requirements of the Economy Act of 1932, as amended.

With regard to your reference to the Project Order Act, the Department complies by treating inter-department orders as obligations against appropriations.

Consistency With Mission

DOE ensures that the work authorized is consistent with the mission of the laboratory and does not interfere with DOE work, by evaluating the task statement with respect to work performed at the laboratory. When it is not apparent that the work is consistent with these principles, the appropriate DOE office requests a statement from the laboratory explaining how the work is consistent with the laboratory's assigned mission and can be accomplished without interference to other DOE commitments. This response is reviewed and the Department then determines whether or not the work will be performed. In this case it was determined that the work was within the mission of the laboratory and would not interfere with other DOE activities. As a member of the intelligence community, DOE is responsible for providing expert technical, analytical and research capability to other agencies within that community. DOE uses some of its laboratories to fulfill this responsibility. The subject project is consistent with the scope of DOE's charter, as set forth in Executive Order 12333, and was accepted on that basis.

Compliance With Regulations

As a practical matter, DOE accepts the determination of a requesting agency with regards to competitive procurement regulations and end of year spending restrictions. If there is reason to suspect otherwise, the Department will pursue the matter with the requesting agency. With regard to the subject project, the Department accepted the determination made by the Army. This process has been strengthened in the new Order with the requirement for a written statement.

Placement of Work

DOE was not aware, on September 24, 1986, of any efforts made by the Army to place this work under contract with a private firm during fiscal year 1986. Had DOE been aware of any such efforts, it would have requested further explanation from the Army justifying its proposal to place the work at the Los Alamos National Laboratory (LANL).

Scope of Work

On September 24, 1986, DOE was aware of the scope of work as it was described on the Military Interdepartmental Purchase Request and as discussed between the Army and LANL on September 10. The Army estimated the cost of this work would be $300,000 and wanted the work to be accomplished by September 30, 1987.

Contracting Officer Review

The cognizant DOE contracting officer, the Director of Energy and Technologies Division (by formal delegation of authority from the AL Manager), reviewed the subject project and approved it as suitable work for the laboratory, prior to its acceptance by DOE.

CONCLUSION

DOE has taken actions over the years to improve the process for managing work performed for others and to ensure that the work assigned to our laboratories is mission related and is in conformance with appropriate laws and regulations. The DOE laboratories have much to offer to this Nation, but it is not our intention to have them compete with the private sector. The laboratories have a proven capability for research and development that over the past 45 years has been beneficial to other Federal agencies and the private sector in accomplishing work that might not otherwise have been performed. Many of these efforts have resulted in discoveries that have benefited us all. Overall, in my opinion, the work performed for others by the Department of Energy has been a major success and has made valuable scientific contributions to both the private and public sectors.

Senator **Levin**. Thank you very much, Mr. Peebles. Just on that last point, on September 24, 1986, the Department of Energy was still unaware of the efforts to place this order with a private firm and of the interest of the private firms in doing this work, and did not ask the Army about any negotiations as of that point?

Mr. **Peebles**. That is correct, Mr. Chairman, to the best of my understanding.

Senator **Levin**. As I understand your testimony, you assumed that the proper determination was made by the Army?

Mr. **Peebles**. That is correct, Mr. Chairman.

Senator **Levin** The determination required by law, that a private firm could not do this work for the Government?

Mr. **Peebles**. That is correct, Mr. Chairman.

Senator **Levin**. How, then, could the Department of Energy have found—how could there have been a finding actually signed by a Deputy Assistant Secretary of Energy that the activity meets the criteria set forth by law?

Mr. **Peebles**. I believe you are referring to Mr. Boykin's certification?

Senator **Levin**. Yes.

Mr. **Peebles**. If I remember that correctly, Mr. Boykin approved this as work that was compatible with our mission, that related to our intelligence responsibilities as one of the intelligence agencies, and then proceeded to put a caveat at the bottom of his page that says, "This approval is subject to all of the laws, regulations," and so forth.

In other words, I——

Senator **Levin**. Mr. Boykin said the following on September 16, "I have reviewed the attached request and I have found that the activity meets the criteria set forth in the relevant Department of Energy orders."

The Department of Energy orders include Order 5000.1 which says that, the work is not "within the capability and the interest of . . . industry." That is one of the orders.

Mr. **Peebles**. I believe Mr. Boykin was making a statement that at his level he felt that this work was appropriate to be done because it was compatible with the intelligence mission of the Los Alamos Laboratory, and the missions of the Department of Energy.

I believe Mr. Boykin did conclude that since he was not, per se; an expert in the application of all the rules, laws, and regulations, that if in the subsequent staff review, others found the request to be in compliance, the regulations obviously prevailed. In other words he provided a caveat.

Senator **Levin**. That is the purpose of his caveat, which says that: "In all cases where Department of Energy regulations and procedures conflict," then those "regulations and procedures will apply." That is one hell of a certification. He says, I am certifying A, but if this certification is inconsistent with B, then I ain't certifying it.

I mean, why sign it?

Mr. **Peebles**. Mr. Chairman, we do have a requirement that from the standpoint of intelligence activities, from the standpoint of whether or not we consider these to be, generally speaking, within our intelligence community responsibilities, a requirement for headquarter's approval.

However, it is the contracting officer for the laboratory, and the manager of the operations office whose responsibility it is to assure proper application of the departmental requirements on performing work for others.

Senator LEVIN. Was there, then, a certification by someone else that this work was not within the capability and interest of industry?

Did anyone at DOE ever certify that industry was not capable or interested in doing this work?

Mr. PEEBLES. There is no formal certification to that effect in this case.

Senator LEVIN. Don't your rules require you to have that certification?

Mr. PEEBLES. Our current rules——

Senator LEVIN. No, your rules then—your then standard, Order 5000.1?

Mr. PEEBLES. Our rules, I believe 4300.2 is the principal order here, requires the contracting officer to determine whether or not the capability to perform the work exists in private facilities. We require the requesting agency to provide information to assure that this work is not the kind of work that should most appropriately be done in the private sector.

We also require a confirmatory assessment be made of those findings.

Senator LEVIN. This rule has been in effect since 1980. It's a DOE order, and my question is, did anybody for the DOE ever certify that this work was not within the capability and interest of industry to perform? That is my question.

Mr. PEEBLES. Mr. Chairman, as for as I can ascertain, the Department did not make a formal certification to that effect.

Senator LEVIN. Nobody at DOE made that certification?

Mr. PEEBLES. That is correct, Mr. Chairman.

Senator LEVIN. That is regulation number one that was ignored and violated.

Mr. PEEBLES. In essence, we did not follow our own regulation by making a proper determination.

Senator LEVIN. Let me just turn to Dr. Priddy for a moment. The guts of the matter, as I understand it, stripping away all of the afterthoughts, is that the Army didn't want to lose money during the fiscal year and wanted to put that money to the use that it felt was important, and as of September 4, was laboring under the belief that if it didn't switch that money to a laboratory, it would lose the money. Is that not the guts of it?

Dr. PRIDDY. Sir, we have been in the business of assessing this type of problem since 1976 when we started looking at the survivability of cruise missiles, and about the 1978 timeframe we realized that we were painfully aware that terrain and vegetation affects around surface-to-air missile sites were a big player, significant factor, in assessment of survivability of some of these weapon systems, especially low cross action weapon systems.

We started an effort at that time to try to model these various techniques, and in 1984 we submitted a plan to do this type work to get the money allocated to do this type work. We received the money in 1986 and tried to put the money under contract to get this work done.

Senator LEVIN. You had a timetable for that, and that timetable was met by the private sector, is that not true?

You had certain milestones on that contracting process and in each case GeoSpectra met the milestone.

Dr. PRIDDY. They met their milestones, yes, sir.

Senator LEVIN. In early September 1986, the Army was informed, or believed, that unless the money were transferred to the laboratory that it would lose it for this purpose. Isn't that just the simple truth?

Dr. PRIDDY. We were told by our contracting officer who works for MICOM, they provide contract support to us, that they could not get a commercial contract in place by September 30, and that we would lose the funds otherwise.

Senator LEVIN. And that was what caused the Army to deal suddenly with the laboratory, isn't it?

Dr. PRIDDY. That was the primary emphasis.

Senator LEVIN. We might as well get right to that fact. It wasn't a fact—it turned out to be a fiction, but nonetheless, the Army was afraid it was going to lose the money, and the fast way not to lose the money was to get it to a lab where you didn't have to go through a lot of paperwork and process in order to get the money spent during the fiscal year. Isn't that the simple truth?

Dr. PRIDDY. Sir, the primary aspect for trying to get this thing done was to support our critical mission. The few options we had——

Senator LEVIN. I understand that. I support the mission. I am on the Armed Services Committee. I want to get the mission performed, too. That is not the issue. I also want to get it performed according to law, and I don't want to trample on small business in this process, and that is the function of this Committee.

We decided to deal with small business here. We went through a process: We solicited proposals, we got proposals, we had milestones. The private sector lived up to those milestones. The proposal came in, and it suddenly hit somebody in the Army on September 4, or a few days right before the 4th, that it wouldn't work—we couldn't meet the timetable because we couldn't get the audit done in time. Isn't that just what happened?

Dr. PRIDDY. Both the contractors met their milestones. The Army could not meet its milestones. We ran into difficulties in letting the contract.

Senator LEVIN. You decided the only way we are going to get this money spent in time for a useful purpose is to send the darn thing to the laboratory.

Dr. PRIDDY. Yes, sir. The only alternative was to try to rebudget and maybe do the work by the 1991 timeframe.

Senator LEVIN. I understand. The bottom line here is—you are not trying to justify this process here, are you?

Dr. PRIDDY. No, sir. I am trying to explain the——

Senator LEVIN. Can you justify what happened to this small business?

Dr. PRIDDY. Can I justify what happened to small business?

Senator LEVIN. To this small business, can you justify it?

Dr. PRIDDY. As a taxpayer I don't feel good about that, in terms of what happened to the small business. We were attempting to——

Senator LEVIN. I know what the Army was doing, and I understand what the Army is saying. I am not going to repeat it because it is clear what happened here. What happened is we took some shortcuts. We ignored the regs, and we ended up spending more money than we should have spent had we gone about this in the way that the law requires us to go about it, which is to make sure that a small business is offered this opportunity if it is available to do it.

I think we ought to just acknowledge there was a screw-up here. I think it is the simple way to do it, rather than go through a whole lot of retroactive justifications for why the laboratories have bigger computers, or they've got certain this or certain that. That's got nothing to do with it.

I think the best thing for the Army to do is just to acknowledge it. If you had to do it all over again, you wouldn't do it this way, would you?

Dr. PRIDDY. What we tried to do in the first place was to contract it out to business.

Senator LEVIN. You could have gotten it done that way. You didn't do it that way because the Army internally did not meet its own milestones.

Dr. PRIDDY. My organization couldn't get it done that way because of the various regulations that we were responding to internally to meet all the internal milestones.

If I could point out one other thing, too, in terms of the proposals from the contractors and the DOE work. We are comparing apples and oranges in those two cases, because the work that Los Alamos is doing is not the same work that the contractor was doing. There are various differences there. The effort was expanded to do additional work at Los Alamos. They are going to implement this technique on our computer.

Senator LEVIN. You had a 2 page proposal from Los Alamos after about 3 months, right?

Dr. PRIDDY. Yes, sir, we have a proposal.

Senator LEVIN. You got that proposal after about 2 or 3 months from Los Alamos, didn't you? After dealing with the private sector for a year, after the private sector met all the milestones, going through the $30,000 cost of preparing all that—suddenly, without any explanation, it's bang—we can't meet our own target. Sorry. No explanation, just sorry, fellow, the money goes to Los Alamos.

That is what happened here. The private sector is entitled to more. We ought to say it. We ought to say the private sector is entitled to more and we screwed up. We can't seem to get that. Instead we get a defense. We get the retroactive justification.

Suddenly there are advantages which are found to Los Alamos—which are all irrelevant. We can argue over them for half this day, by the way, as to whether or not there are really advantages or not.

It is irrelevant to your decision. The decision was not based on that. The decision was based on your determination that we won't be able to get this money spent this fiscal year unless we go to a laboratory. That was the basis of the decision.

Why not just acknowledge it? Why not say, we shouldn't be doing business this way and we will try to avoid it in the future? Frankly, that troubles me more than anything.

Dr. **Priddy**. As I indicated, we were trying to do business with the private sector.

Senator **Levin**. Was there a written proposal from Los Alamos before the end of the fiscal year?

Dr. **Priddy**. Sir, if I can describe the proposal technique——

Senator **Levin**. If you could answer that—was there a written proposal from Los Alamos before the end of the fiscal year?

Dr. **Priddy**. There was a written—no, there was not. There was a written statement of work provided to us almost in conjunction with the transfer of the funds, and that is stated on the MIPR itself.

Senator **Levin**. The Army described the work and sent it to Los Alamos along with an offer of $300,000, but there was not written proposal from Los Alamos, is that correct?

Dr. **Priddy**. That agreement had been worked out between my engineer and their engineers as to the nature of the work, the personnel assignments, the amount of computer time.

Senator **Levin**. Was that a one-sentence description?

Dr. **Priddy**. No, sir. That was a full day's work.

Senator **Levin**. No, no—was it a one-sentence written description on the interagency transfer?

Dr. **Priddy**. That is what was on the MIPR.

Senator **Levin**. So what we had before the end of the fiscal year was a one-sentence description of the work, on an interagency transfer called a MIPR?

Dr. **Priddy**. As far as what was in writing.

Senator **Levin**. That is what I said.

Dr. **Priddy**. OK.

Senator **Levin**. Now, the authorization for the MIPR, that interagency transfer, was the Project Order Act. The Project Order Act is the authority for the transfer of $300,000, as I understand it, to the Department of Energy. Is that correct, Dr. Priddy?

Dr. **Priddy**. As I understand it, that's correct.

Mr. **Peebles**. No, sir. My understanding of the Project Order Act is that it has to do with the commitment of funds. Once an agency places work with another agency it obligates that amount of money to be spent, and the other agency can proceed to spend that money on the project.

My understanding on the authorities for performing work for another agency go beyond that. The primary authorities are the Economy Act and Atomic Energy Act. We also have a long-standing memorandum of understanding with the Department of Army in which we generally agree to do supportive work provided, of course, all of the relevant regulations are followed.

We accepted this task under that general memorandum of understanding.

Senator **Levin**. You mentioned the Project Order Act.

Mr. **Peebles**. Yes. I was responding to a question you had raised in the letter to us.

Senator LEVIN. What is the relevance of the Project Order Act?

Mr. PEEBLES. As I said earlier it has to do with the commitment of funds.

Senator LEVIN. Wasn't that specifically the reference made by the Department of Energy—I mean Department of Army—in the interdepartmental purchase request? In the MIPR, didn't they specifically rely on 41 USC 23 which is the Project Order Act? Isn't that the cited source of authority?

Mr. PEEBLES. Yes, sir, but my understanding of the MIPR document is that it is a financing document. It is a commitment that funds are available, will be reserved within the sending agency's appropriation and obligated for the task so that it can be later reimbursed to the performing agency.

Senator LEVIN. But it was pursuant to that statute that these funds were sent to you?

Mr. PEEBLES. Yes, sir. It is my understanding that the Project Order Act simply operates to assure that each agency is not duplicating the use of appropriated funds for that particular project.

Senator LEVIN. Let me ask Dr. Priddy, is it your understanding that the authority for transferring the money to the Department of Energy was that Act?

Dr. PRIDDY. Sir, I am not an expert on that matter.

Senator LEVIN. You testified to it—that on September 12 the MIPR for $300,000 was forwarded to DOE under the authority of the Project Order Act. That is your own testimony.

Dr. PRIDDY. My understanding of the Project Order Act is that it obligates us to certain financial obligations with the customer in this case.

Senator LEVIN. Was your testimony accurate that this MIPR for $300,000, this interagency transfer of $300,000, was forwarded to DOE under the authority granted to you by the Project Order Act?

Dr. PRIDDY. Yes, sir.

Senator LEVIN. That is your testimony?

Dr. PRIDDY. Yes, sir.

Senator LEVIN. Is it not true that the Project Order Act is limited to Government-owned and Government-operated facilities and Los Alamos is not one?

Dr. PRIDDY. Again, I am not an expert in that area.

Senator LEVIN. Can someone tell us here? You folks are supposed to be administering this law. Isn't the Project Order Act limited to Government-operated, Government-owned facilities of which Los Alamos is not one?

I will ask the question again. Does anyone know the answer to that question?

Mr. PEEBLES. I do not have the answer handy.

Senator LEVIN. Let me answer it. The answer is yes. I hate to answer my own questions but the only authority that you are citing here for this transfer, and I am looking at Dr. Priddy here, doesn't help you any. You need to come back with an explanation for the record on this, because this doesn't help you.

You've got to find something else, which I don't think you are going to find. Nonetheless, I would expect you to explain for the record how is it that you utilize the authority of the Project Order

Act for this transfer when that Act is limited to Government-owned, Government-operated facilities.

Mr. **Peebles**. We will provide that.[1]

Senator **Levin**. Let me turn the microphone over to Senator Kerry for a moment.

STATEMENT OF HON. JOHN F. KERRY, A U.S. SENATOR FROM THE STATE OF MASSACHUSETTS

Senator **Kerry**. I just wanted to say that I apologize to all of the witnesses and I thank the Chair for his indulgence. I am not going to ask any questions now, to your relief perhaps, because I have an Aviation Subcommittee hearing that is going on simultaneously and I need to be there.

I did want to come here to underscore what I think is an important effort by the Chairman, and that this Senator at least believes very strongly that this is an issue of great importance to us.

While obviously for competitive reasons and everybody is talking about competitiveness today—it has become the new buzzword—we need federally funded research and development centers and that is clear. We obviously also are a Country that is based on our entrepreneurial private abilities, and we have to look at carefully the balance that has to be struck between our federally funded R&D centers and private interests that want to compete and ought to compete, and I think we most importantly want to have compete.

I just wanted to say, Mr. Chairman, that I think it is very important what you are doing here. I congratulate you for pursuing this. I know that the president of a company, Jack Rennie from Massachusetts is going to be testifying. He has made an important contribution in our State in business and high technology. Having read his testimony, I think he has an important contribution to make to this.

I certainly want to continue to try to be active in it and hope we can resolve it. I thank you, Mr. Chairman.

Senator **Levin**. Thank you very much, Senator Kerry. You have indeed been active in this area. It is an area which is critically important, not just to the country, but also to your own State which has been such a leader in this area, and to the small businesses in all of the States. They need a fair shake.

There are times when we are going to use the labs, and I think everybody knows that. We have set forth in the regs when we are going to use these labs. We ought to follow our own regs. They were not followed here. If we screw up, we ought to acknowledge it—it is going to happen once in a while—and not pretend and come back and paper over it and justify it.

Because when the justifications come forward rather than the apology, then the small business community says, oh my gosh, we are going to get more of this.

That is what really troubles me a great deal. I am troubled by the fact that this work was obviously intended to go to a small business. There was competition. The businesses met the milestones. They were cheaper by a significant amount than the money we sent to a Government lab with a one-sentence statement of work, after the small businesses had worked for a year and a half to do the project.

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[1] See pages 104, 105, response to questions Nos. 8 and 9, for the record.

Again, if the Government had simply said, "Folks, we blew it and we are not going to blow it again because we've got regs, and we are going to tighten them if necessary, and this thing shouldn't happen again," I think small business would shed some tears and go on their way.

It is the justification which really troubles me here. It is this retroactive papering-over of what was obviously a mistake that is so darn troubling to me and, I think, to small business.

You've got millions of purchase orders. The Army engages in millions of these a year. When a mistake is made the best thing to do is simply acknowledge it. It is the defense of what happened here which is troubling for the future. I say that as sincerely and honestly as I can to you gentlemen and continue to ask questions so, hopefully, if we need legislative action to make sure this doesn't happen again, we can take legislative action based on a record.

It is clear that we had a reg which the DOE ignored in this case. You didn't make the necessary finding. The authorization for the transfer was not proper, because the Act which you cite as authorization is not applicable here.

When we go through the chronology, the chronology is that on September 4 we had the Government of the United States telling a small business, "We've got a problem. We can't get you audited in time for the fiscal year."

That business says, "Wait a minute, yes you can." They call up the DCAA auditor themselves, and that auditor, who had just done the audit 2 months earlier, comes in the next day and audits them, and they are fine. I don't think that information ever got to the right people in the Army. It is pretty obvious it never got to the right people.

A week later the Army says, "Sorry." No explanation. All this business about too few computer hours and all of that, which was a subject for negotiation of the contract, is an afterthought. That is what sticks in my craw here. It is the principal of it.

We have to promote private enterprise and the technology spinoffs from defense contracts. That is what this Country is all about. We want the private sector. We want to encourage them, not throw a wet blanket over them.

Again, what happened here is a double shame. It never should have happened in the first instance. Since it did happen, the best thing to do is acknowledge it—simply acknowledge it and say, "We blew it," which we did.

Now, that's not a question. That is a statement. You wanted to get a word in, Mr. Peebles.

Mr. **Peebles**. Although we will go back and learn more about the Project Order Act, I do have an excerpt from that Act in front of me now. The wording that I see applies to Government-owned establishments, and I don't see Government-owned, Government-operated.

Senator **Levin**. We will give you the cites. Your regulation is DOE Order 2100.10, (10-17-83), page 11, where it talks about Project Order Agreements, 14(b)(1), which says, "Agreements entered into under the provisions of the Project Order Act (41 U.S.C. 23) are designed for use in ordering work and materials that are to be provided by a Government-owned and Government-operated (GOGO) establishment." That is DOE Order 2100.10, dated October 17, 1983.

In the Department of Defense Instruction on this, dated May 4, 1971, the definition is—maybe you've got something later than this, I don't know—but, "a Project Order," is a specific, definite and certain order issued under the authority contained in 41 U.S.C. 23 . . . [for] work or services which, when placed with and accepted by a separately managed and financed Government-owned and operated establishment and so on." That is what the DOD requirement is according to their regs.

According to the regs we have in front of us, project orders are limited to GOGOs.

Dr. CAMERON. Mr. Chairman, I would like to make a statement. I am Dr. Louis Cameron. I am the Director of Research and Technology in the Office of the Assistant Secretary of the Army for Research and Development and Acquisition.

It appears that this contract in question was entered into without compliance of regulatory requirements to determine economic and convenience of contracting with the Government-owned contract operated laboratory by the Army.

In that I have staff responsibility for the Army laboratory system, I am taking action to notify all Army laboratories of the Federal acquisition regulation in this matter, and of the DOD supplement, and I will ensure that all comptrollers and procurement offices are reminded of this regulation. I will be happy to provide a copy of that to you, sir, if you would like.

Senator LEVIN. Thank you. Dr. Cameron, we appreciate that statement and we certainly welcome receipt of that notice when it is sent out.

Can you just answer a few questions while we've got you on the hot spot here?

Dr. CAMERON. Yes, sir.

Senator LEVIN. Do you agree that agencies should not be assigning routine work requests to the FFRDCs?

Dr. CAMERON. Yes, sir.

Senator LEVIN. Is it the Army's policy not to assign routine work requests to FFRDCs?

Dr. CAMERON. Yes, sir.

Senator LEVIN. You have indicated the steps that you are going to take now. Will you submit those for the record after they are taken?

Dr. CAMERON. Yes, sir. We have a procedure, and unfortunately this action did not follow that procedure. The Army has a standing MOU with the DOE laboratories in that we review each year the work that is going to be done under that agreement at very high levels and we make sure that it is of mutual benefit to both agencies. This program is cost-sharing where the Army puts up certain dollars and DOE matches those dollars.

That MOU is signed by Dr. Sculley, the Assistant Secretary of the Army for R&D. We have a 3 day meeting every year at the end of each year to ascertain the results of what was done and the benefits to both agencies.

Most of the work under this agreement is our munitions, armor, and anti-armor.

[Material follows:]

DEPARTMENT OF DEFENSE
UNITED STATES OF AMERICA

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0103

21 April 1987

Commander, U.S. Army Materiel Command, 5001 Eisenhower Avenue,
  Alexandria, Virginia 22333-0001
Office of the Deputy Chief of Staff for Personnel,
  ATTN: DAPE-PSR, Washington, D.C. 20310-3000
Office of the Chief of Engineers, ATTN: DAEN-RDZ,
  20 Massachusetts Avenue, Washington, D.C. 20314-1000
Commander, U.S. Army Medical Research & Development
  Command, Fort Detrick, Maryland 21701-5012

A recent inquiry from the U.S. Congress on behalf of small business emphasizes that pertinent regulatory guidance regarding contracting for services from Federally Funded Research and Development Centers (FFRDCs) needs review by contracting officers, comptrollers and laboratory commanders/directors. Although FFRDCs, such as those of the Department of Energy, have the capability to perform extensive services by virtue of their specialized research capabilities, there exist limitations regarding Army use of their services.

There are both substantive and procedural limitations on the use of FFRDCs to satisfy Army requirements for services. The procedural limitations are embodied in the Economy Act of 1932, 31 U.S.C. §1535, as implemented by the Federal Acquisition Regulation (FAR) subpart 17.5, and the Defense Federal Acquisition Regulation Supplement (DFARS) subpart 17.5. In essence, these guidelines require formal documentation of interagency agreements to provide supplies or services on a reimbursable basis.

The substantive limitations are set forth in the Competition in Contracting Act (CICA), 10 U.S.C. §2304, and OFPP Policy Letter 84-1. In addition, the Economy Act establishes a substantive limitation on the authority to engage in interagency acquisition. CICA limits other than fully competitive awards to FFRDCs except when the services offered by a particular FFRDC are unavailable from another source or when it is necessary to award a service contract to an FFRDC in order to maintain the facility for mobilization purposes. See U.S.C. §2304(c)(1) & (3). Specific guidance on the application of these provisions is found in FAR 6.302-1(b)(1) and 6.302-3(a)(2)(ii). OFPP Policy Letter 84-1 repeats these general proscriptions, and it further defines the circumstances that must exist in order for an award to an FFRDC from an agency other than the center's sponsor to be proper. For instance, the letter stipulates that "(n)on-sponsoring federal agencies may use an FFRDC only if the terms of the FFRDC's sponsoring agreement or contract permit work from other than a sponsoring agency." OFPP Policy Letter 84-1 at para. 6(f). Finally, the Economy Act requires acquiring agencies to certify that an interagency order is in the "best interest of the United States Government," and that the "services cannot be provided by contract as conveniently or cheaply by a commercial enterprise." 31 U.S.C. §1535(a)(2) & (4). See generally FAR 17.5; DFARS 17.5.

There is no legal obstacle to executing a contract outside of the Economy Act directly with a nonsponsored FFRDC provided the center's sponsoring agreement does not prohibit such an action and provided that the action is otherwise authorized by CICA. See OFPP Policy Letter 84-1 at para. 6(f). Of course, regardless of the contracting approach selected, the services acquired from an FFRDC "must clearly fall within the purpose, mission, and general scope of effort established by the sponsoring agency for the FFRDC." See id.

J R Sculley

J. R. Sculley
Assistant Secretary of the Army
(Research, Development and Acquisition)

Senator LEVIN. Let me ask Dr. Priddy a specific factual question here. Did MSIC know on December 8 when it canceled the RFP that the DCAA had finished the audit?

Dr. PRIDDY. September 8, sir?

Senator LEVIN. Yes.

Dr. PRIDDY. No, sir, we didn't. That action is handled by the MICOM Contracting Office and those are internal milestones that they use in the contract process.

Senator LEVIN. It was the fact that the audit couldn't be completed in time which created the storm warnings for you, wasn't it?

Dr. PRIDDY. Apparently that was the case, sir.

Senator LEVIN. When the audit was completed in time, that information never got to the party that it had to get to, as I understand it.

Dr. PRIDDY. That appears to be the case.

Senator LEVIN. I had one question that came up before about whether DOE asked the Army about the attempt to contract with GeoSpectra for the same work, and DOE indicated that they didn't and they didn't know about it.

Did you tell DOE anything, or did anybody in the Army tell DOE anything about the attempt to contract with GeoSpectra for the same work?

Dr. PRIDDY. I am not sure about that.

Mr. KIRKLAND. My name is Pete Kirkland and I work with MSIC. We did not, in our first meeting, specifically mention an attempt to contract with GeoSpectra. We did mention work we had going on since the early 1980s with others to do this type work, but we did not mention GeoSpectra.

However, we did mention Dr. Vincent, and only through Don Slaymaker's association with him as a possible expert in ratioing which he could be used as a possible consultant along with several other people.

Senator LEVIN. You didn't tell DOE that there was an RFP out on this?

Mr. KIRKLAND. No.

Senator LEVIN. We have a disconnect here, both within the Army because the part of the Army that said that the audit couldn't be done in time was never informed that the audit was done in time, and between the Army and the DOE. So we've got two disconnects here. That is what this Subcommittee is worried about and which we have to address.

If those disconnects had not occurred, presumably this contract would have been awarded the way it should have been, to a private firm, and the way it was intended to be. You put an RFP on the street because you wanted it to go to a private firm.

I presume if all the advantages of the laboratory were the real reason for canceling the RFP there never would have been an RFP to begin with.

Dr. PRIDDY. No, sir.

Senator LEVIN. Let me ask DOE about the Los Alamos mission. The contract between Los Alamos and the DOE states that Los Alamos "shall perform research, development and educational activities related to the nuclear sciences and the use of energy in mutually selected military and peaceful applications, engineering services, and such other activities as the parties may agree upon from time to time."

My question of either of you—I am not sure to whom I should address this—would be how this research project involving computer analysis of satellite photos relates to nuclear sciences and the use of energy?

Mr. PEEBLES. I believe some of the words you mentioned in there were military uses.

Senator LEVIN. Let me give you the exact wording again. The deal between the two of you is Los Alamos "shall perform research, development and educational activities related to the nuclear sciences and the use of energy in mutually selected military and peaceful applications, engineering services, and such other activities as the parties may agree upon from time to time."

I know this is obviously an activity which the parties agreed upon from time to time. My question is how does this activity relate to the nuclear sciences and the use of energy?

Mr. PEEBLES. Mr. Chairman, I think I would try to respond in two ways. We see a defense or military intelligence relationship to that project. We also have——

Senator LEVIN. "Nuclear sciences and the use of energy"—it is not just "defense". Obviously there is a defense connection to the project—the Army is doing it.

Mr. PEEBLES. I thought the words that you used did indeed provide for pursuit of military defense objectives.

Senator LEVIN. No. I will read it again. Los Alamos "shall perform research, development and educational activities related to the nuclear sciences and the use of energy in mutually selected military and peaceful applications."

So it's got to be related to the nuclear sciences and the use of energy in mutually selected military applications.

Mr. PEEBLES. In addition to that mission there is an Executive order, and I can give you the number of it, 12333, having to do with the United States activities in which the Department of Energy is identified as an agency that will provide support and services to the other intelligence agencies of the Government.

Senator LEVIN. Is that Executive order also related only to the nuclear and energy field?

Mr. PEEBLES. No, sir. I'll quote from one section of it. "To provide expert technical, analytical, and research capability to other agencies within the intelligence community."

Senator LEVIN. Are you saying that Executive order was intended to expand the mission of Los Alamos?

Mr. PEEBLES. I am saying that the Executive order places a responsibility on the Department of Energy to cooperate with other agencies and to utilize its resources to cooperate with other agencies.

Senator LEVIN. So that any intelligence activity, as far as you are concerned, can be assigned by DOE to Los Alamos?

Mr. PEEBLES. We can assign tasks to the Los Alamos laboratory in the intelligence area, yes, sir.

Senator LEVIN. That is not the way we read the law. That is a matter of congressional intent. We believe that the mission of Los

Alamos is supposed to be related to nuclear sciences and energy—not anything.

What we will do here, if a statute needs clarification, is go back and clarify it because I think under your umbrella you can send just about anything to Los Alamos and that is not what the intent was. It wasn't that broad. We don't believe the law permits that, but we will go back and if there is any ambiguity, we will clarify the intent. If there is no ambiguity, we will so notify DOE.

Thank you all very much for coming, and keep us informed on your activities as to how we are going to try to make sure this doesn't happen again.

We will make part of the record here two documents. One is the cancellation of the RFP where it says the funds can't be carried over, so the requirement is withdrawn. Also, the interagency transfer, the MIPR, will be made part of the record.

[Material follows:]

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGO

REFERENCE OR OFFICE SYMBOL AIAMS-YMP	SUBJECT Cancellation of Requirement, "Enhanced Terrain Clutter Model PAN 31620, Competitive

TO AMSMI-PC-BFB ATTN: Mr. Pearson	FROM AIAMS-YMP	DATE 8 Sep 86 CMT 1 Mrs. Brazzel/sq/68603

1. Reference meeting, contracting officers, your branch, and personnel of U.S. Army Missil and Space Intelligence Center (MSIC), 4 Sep 86.

2. During ref meeting, the requirement placed under PAN 31620 was identified as a slip to FY87. Since these funds cannot be carried over, the requirement is hereby withdrawn. Func will be decommitted as quickly as possible.

3. MSIC appreciates your support in trying to make the FY86 award.

4. AIA - Intelligence with Integrity.

JEAN E. BRAZZEL
Contract Specialist

CF:
AMSMI-PC-BFB/Ms. Shankle

CONCUR: Don A. Slaymaker DATE: 9-8-86
DON A. SLAYMAKER
Technical Contract Monitor

CONCUR: Francis Cline DATE: 9/8/86
FRANCIS CLINE
Chief, Anal Tech Gp

CONCUR: Edward R Wynn DATE: 9/8/86
EDWARD R. WYNN
Chief, Systems Simulation and Scientific
Applications Directorate

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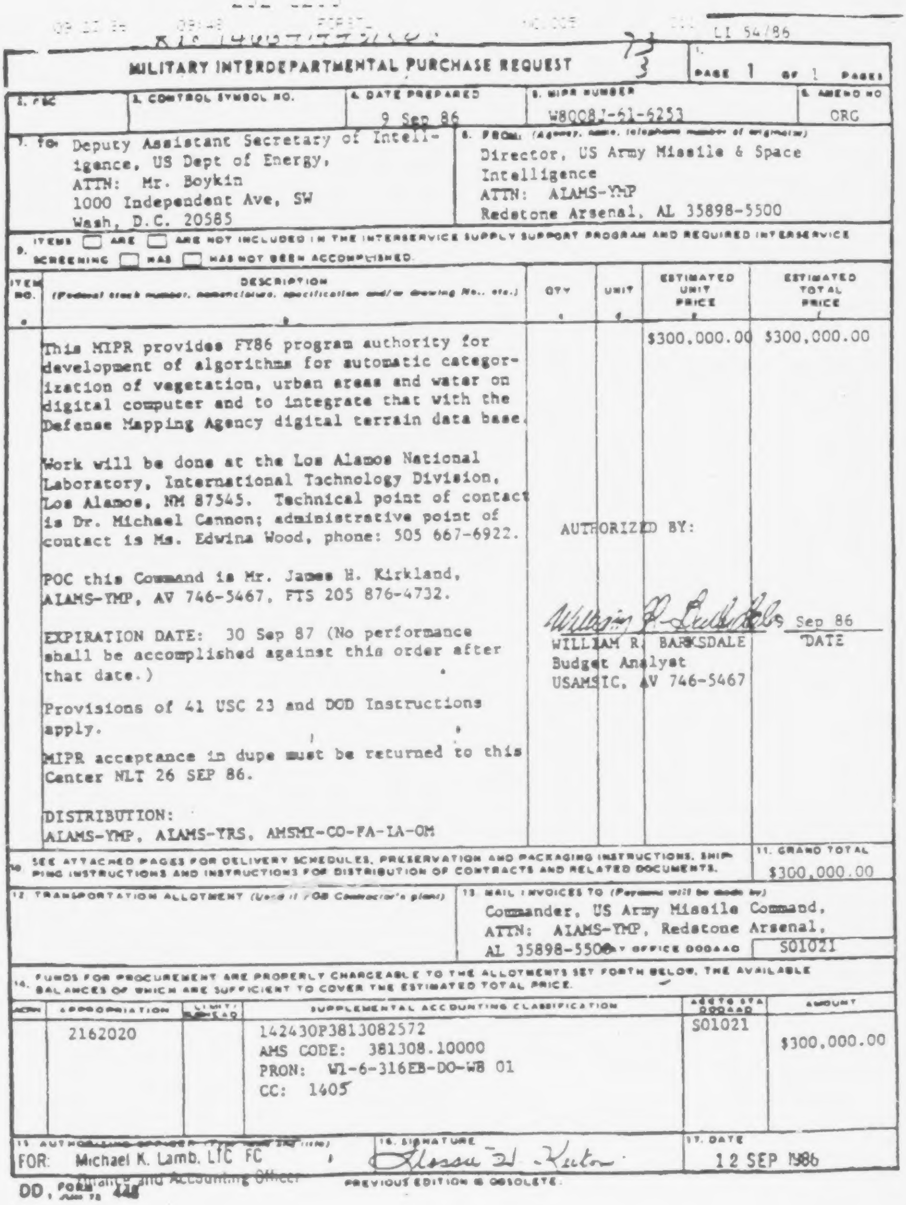


LI 54/86

MILITARY INTERDEPARTMENTAL PURCHASE REQUEST

1. PAGE 1 OF 1 PAGES

2. FSC	3. CONTROL SYMBOL NO.	4. DATE PREPARED	5. MIPR NUMBER	6. AMEND NO
		9 Sep 86	W80083-61-6253	ORG

7. TO:
Deputy Assistant Secretary of Intelligence, US Dept of Energy,
ATTN: Mr. Boykin
1000 Independent Ave, SW
Wash, D.C. 20585

8. FROM: (Agency, name, telephone number of originator)
Director, US Army Missile & Space Intelligence
ATTN: AIAMS-YMP
Redstone Arsenal, AL 35898-5500

9. ITEMS ☐ ARE ☐ ARE NOT INCLUDED IN THE INTERSERVICE SUPPLY SUPPORT PROGRAM AND REQUIRED INTERSERVICE SCREENING ☐ HAS ☐ HAS NOT BEEN ACCOMPLISHED.

ITEM NO. a	DESCRIPTION (Federal stock number, nomenclature, specification and/or drawing No., etc.) b	QTY c	UNIT d	ESTIMATED UNIT PRICE e	ESTIMATED TOTAL PRICE f
	This MIPR provides FY86 program authority for development of algorithms for automatic categorization of vegetation, urban areas and water on digital computer and to integrate that with the Defense Mapping Agency digital terrain data base.			$300,000.00	$300,000.00

Work will be done at the Los Alamos National Laboratory, International Technology Division, Los Alamos, NM 87545. Technical point of contact is Dr. Michael Cannon; administrative point of contact is Ms. Edwina Wood, phone: 505 667-6922.

POC this Command is Mr. James H. Kirkland, AIAMS-YMP, AV 746-5467, FTS 205 876-4732.

EXPIRATION DATE: 30 Sep 87 (No performance shall be accomplished against this order after that date.)

Provisions of 41 USC 23 and DOD Instructions apply.

MIPR acceptance in dupe must be returned to this Center NLT 26 SEP 86.

DISTRIBUTION:
AIAMS-YMP, AIAMS-YRS, AMSMI-CO-FA-IA-OM

AUTHORIZED BY:

William R. Barksdale 9 Sep 86
WILLIAM R. BARKSDALE
Budget Analyst
USAMSIC, AV 746-5467
DATE

10. SEE ATTACHED PAGES FOR DELIVERY SCHEDULES, PRESERVATION AND PACKAGING INSTRUCTIONS, SHIPPING INSTRUCTIONS AND INSTRUCTIONS FOR DISTRIBUTION OF CONTRACTS AND RELATED DOCUMENTS.

11. GRAND TOTAL $300,000.00

12. TRANSPORTATION ALLOTMENT (Used if FOB Contractor's plant)

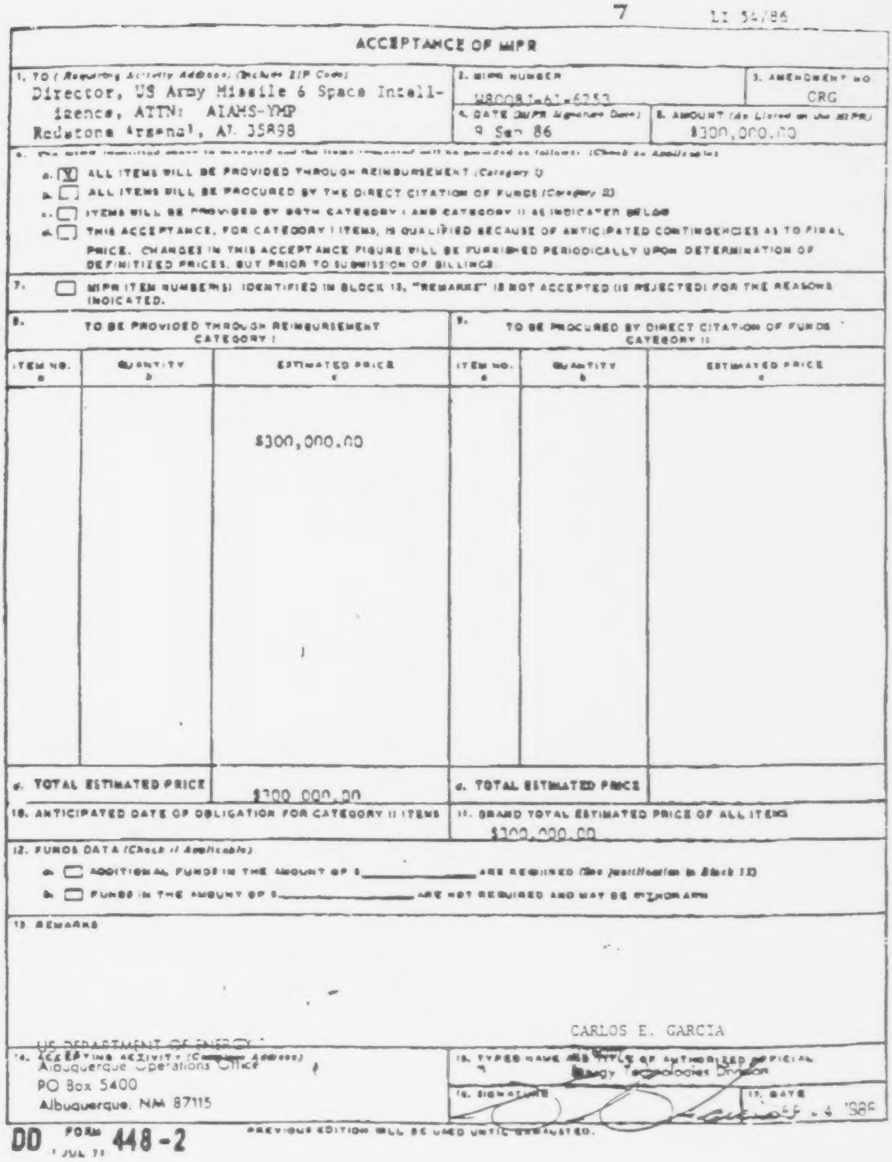
13. MAIL INVOICES TO (Payment will be made by)
Commander, US Army Missile Command,
ATTN: AIAMS-YMP, Redstone Arsenal,
AL 35898-5500
PAYING OFFICE DODAAD S01021

14. FUNDS FOR PROCUREMENT ARE PROPERLY CHARGEABLE TO THE ALLOTMENTS SET FORTH BELOW, THE AVAILABLE BALANCES OF WHICH ARE SUFFICIENT TO COVER THE ESTIMATED TOTAL PRICE.

ACRN	APPROPRIATION	LIMIT/SUBHEAD	SUPPLEMENTAL ACCOUNTING CLASSIFICATION	ACCTG STA DODAAD	AMOUNT
	2162020		142430P3813082572 AMS CODE: 381308.10000 PRON: W1-6-316EB-DO-WB 01 CC: 1405	S01021	$300,000.00

15. AUTHORIZING OFFICER (Typed name and title)	16. SIGNATURE	17. DATE
FOR: Michael K. Lamb, LTC FC Finance and Accounting Officer		12 SEP 1986

DD FORM JUN 78 448 PREVIOUS EDITION IS OBSOLETE.



7 LI 54/86

ACCEPTANCE OF MIPR

1. TO (Requiring Activity Address) (Include ZIP Code)
Director, US Army Missile & Space Intelligence, ATTN: AIAMS-YMP
Redstone Arsenal, AL 35898

2. MIPR NUMBER
W8C08J-61-6253

3. AMENDMENT NO.
CRG

4. DATE (MIPR Signature Date)
9 Sep 86

5. AMOUNT (As Listed on the MIPR)
$300,000.00

6. The MIPR identified above is accepted and the items requested will be provided as follows: (Check as Applicable)

a. ☒ ALL ITEMS WILL BE PROVIDED THROUGH REIMBURSEMENT (Category I)
b. ☐ ALL ITEMS WILL BE PROCURED BY THE DIRECT CITATION OF FUNDS (Category II)
c. ☐ ITEMS WILL BE PROVIDED BY BOTH CATEGORY I AND CATEGORY II AS INDICATED BELOW
d. ☐ THIS ACCEPTANCE, FOR CATEGORY I ITEMS, IS QUALIFIED BECAUSE OF ANTICIPATED CONTINGENCIES AS TO FINAL PRICE. CHANGES IN THIS ACCEPTANCE FIGURE WILL BE FURNISHED PERIODICALLY UPON DETERMINATION OF DEFINITIZED PRICES, BUT PRIOR TO SUBMISSION OF BILLINGS.

7. ☐ MIPR ITEM NUMBER(S) IDENTIFIED IN BLOCK 13, "REMARKS" IS NOT ACCEPTED (IS REJECTED) FOR THE REASONS INDICATED.

8. TO BE PROVIDED THROUGH REIMBURSEMENT CATEGORY I			9. TO BE PROCURED BY DIRECT CITATION OF FUNDS CATEGORY II		
ITEM NO. a	QUANTITY b	ESTIMATED PRICE c	ITEM NO. a	QUANTITY b	ESTIMATED PRICE c
		$300,000.00			
d. TOTAL ESTIMATED PRICE		$300,000.00	d. TOTAL ESTIMATED PRICE		

10. ANTICIPATED DATE OF OBLIGATION FOR CATEGORY II ITEMS

11. GRAND TOTAL ESTIMATED PRICE OF ALL ITEMS
$300,000.00

12. FUNDS DATA (Check if Applicable)
a. ☐ ADDITIONAL FUNDS IN THE AMOUNT OF $________ ARE REQUIRED (See justification in Block 13)
b. ☐ FUNDS IN THE AMOUNT OF $________ ARE NOT REQUIRED AND MAY BE WITHDRAWN

13. REMARKS

14. ACCEPTING ACTIVITY (Complete Address)
US DEPARTMENT OF ENERGY
Albuquerque Operations Office
PO Box 5400
Albuquerque, NM 87115

15. TYPED NAME AND TITLE OF AUTHORIZED OFFICIAL
CARLOS E. GARCIA
Energy Technologies Division

16. SIGNATURE

17. DATE
EP . 4 '986

DD FORM 1 JUL 71 448-2 PREVIOUS EDITION WILL BE USED UNTIL EXHAUSTED.

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LETTER REQUEST MIPR W8008J-61-6253 September 16, 1986

I have reviewed the attached request and I have found that the activity meets the criteria set forth in the relevant Department of Energy orders. The request is therefore approved.

In all cases where Department of Energy regulations and procedures conflict with the provisions of this request, Department of Energy regulations and procedures will apply.

Charles V. Boykin

Charles V. Boykin
Deputy Assistant Secretary
for Intelligence

Attachment

QUESTIONS FROM SENATOR LEVIN AND ANSWERS BY THE DEPARTMENT OF THE ARMY

Question 1. Please provide a copy of the directive which Dr. Louis Cameron indicated the Army is planning to distribute in response to the events associated with the GeoSpectra example.

Answer to Question 1. The directive which enforces the provisions of the Economy Act and those dealing with Federally Funded Research and Development Centers (FFRDC) is enclosed.

DEPARTMENT OF DEFENSE
UNITED STATES OF AMERICA

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0103

21 April 1987

Commander, U.S. Army Materiel Command, 5001 Eisenhower Avenue,
  Alexandria, Virginia 22333-0001
Office of the Deputy Chief of Staff for Personnel,
  ATTN: DAPE-PSR, Washington, D.C. 20310-3000
Office of the Chief of Engineers, ATTN: DAEN-RDZ,
  20 Massachusetts Avenue, Washington, D.C. 20314-1000
Commander, U.S. Army Medical Research & Development
  Command, Fort Detrick, Maryland 21701-5012

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There are both substantive and procedural limitations on the use of FFRDCs to satisfy Army requirements for services. The procedural limitations are embodied in the Economy Act of 1932, 31 U.S.C. §1535, as implemented by the Federal Acquisition Regulation (FAR) subpart 17.5, and the Defense Federal Acquisition Regulation Supplement (DFARS) subpart 17.5. In essence, these guidelines require formal documentation of interagency agreements to provide supplies or services on a reimbursable basis.

The substantive limitations are set forth in the Competition in Contracting Act (CICA), 10 U.S.C. §2304, and OFPP Policy Letter 84-1. In addition, the Economy Act establishes a substantive limitation on the authority to engage in interagency acquisition. CICA limits other than fully competitive awards to FFRDCs except when the services offered by a particular FFRDC are unavailable from another source or when it is necessary to award a service contract to an FFRDC in order to maintain the facility for mobilization purposes. See U.S.C. §2304(c)(1) & (3). Specific guidance on the application of these provisions is found in FAR 6.302-1(b)(1) and 6.302-3(a)(2)(ii). OFPP Policy Letter 84-1 repeats these general proscriptions, and it further defines the circumstances that must exist in order for an award to an FFRDC from an agency other than the center's sponsor to be proper. For instance, the letter stipulates that "(n)on-sponsoring federal agencies may use an FFRDC only if the terms of the FFRDC's sponsoring agreement or contract permit work from other than a sponsoring agency." OFPP Policy Letter 84-1 at para. 6(f). Finally, the Economy Act requires acquiring agencies to certify that an interagency order is in the "best interest of the United States Government," and that the "services cannot be provided by contract as conveniently or cheaply by a commercial enterprise." 31 U.S.C. §1535(a)(2) & (4). See generally FAR 17.5; DFARS 17.5.

There is no legal obstacle to executing a contract outside of the Economy Act directly with a nonsponsored FFRDC provided the center's sponsoring agreement does not prohibit such an action and provided that the action is otherwise authorized by CICA. See OFPP Policy Letter 84-1 at para. 6(f). Of course, regardless of the contracting approach selected, the services acquired from an FFRDC "must clearly fall within the purpose, mission, and general scope of effort established by the sponsoring agency for the FFRDC." See id.

JRSculley
J. R. Sculley
Assistant Secretary of the Army
(Research, Development and Acquisition)

Question 2. A number of federal rules and regulations, such as section 2367(a) of P.L. 99-661, the FY87 defense authorization statute, contain provisions whose application depends upon determining an FFRDC's "purpose, mission and general scope of effort." OFPP Policy Letter 84-1(6)(f), which governs when one federal agency may use another federal agency's FFRDC, states that such work may be handled on an agency-to-agency basis only if the request "clearly fall[s] within the purpose, mission and general scope of effort established by the sponsoring agency for the FFRDC."

(a) How does the Army determine the "purpose, mission and general scope of effort" of an FFRDC which the Department of Defense (DOD) sponsors?

(b) For each FFRDC sponsored by DOD from which the Army has requested work since 1984, identify what the Army has determined to be that FFRDC's "purpose, mission and general scope of effort."

(c) How does the Army determine the "purpose, mission and general scope of effort" of an FFRDC sponsored by another agency?

(d) For each FFRDC sponsored by DOE from which the Army has requested work since 1984, identify what the Army has determined to be that FFRDC's "purpose, mission and general scope of effort."

(e) How does the Army determine whether its work request to another agency's FFRDC "clearly" falls within that FFRDC's "purpose, mission and general scope of effort"?

(f) For purposes of OFPP Policy Letter 84-1(6)(f), in the GeoSpectra example, did the Army make a specific determination that its work request "clearly" fell within the "purpose, mission and general scope of effort" of Los Alamos National Laboratory? If so, what was the basis for this determination? Please provide copies of any Army documents discussing this determination.

INSERT FOR THE RECORD

☐ HOUSE ☐ SENATE	APPROPRIATIONS COMMITTEE	☐ HOUSE ☐ SENATE — ARMED SERVICES COMMITTEE	☐ HOUSE ☒ SENATE	OTHER Small Business Committee
HEARING DATE April 7, 1987	TRANSCRIPT PAGE NO	LINE NO	INSERT NO	

Answer to Questions 2a and 2c. For the Arroyo Center, the only FFRDC sponsored by the Army, determinations of the purpose, scope and mission are made in accordance with Army Regulation 5-21 (copy furnished) at the highest levels of the Army.

For FFRDC of other agencies, the Army becomes aware of the "purpose, mission and general scope of effort" through publications of the sponsoring agency, discussions with the sponsoring agency and the FFRDC.

Answer to Questions 2b and 2d. There is no mechanism for the accumulation of data reflecting Army use of FFRDCs, either Defense or non-Defense sponsored. Therefore, we cannot produce a listing as desired. Generally, however, it is the practice of the Army to rely on the sponsoring agency to make the appropriate determinations.

Answer to Question 2e. There is no Army regulation which deals with the issue of whether a work request "clearly" falls within another agency's FFRDC's "purpose, mission and general scope of effort."

Answer to Question 2f. OFPP Policy Letter 84-1 has not been implemented in the Department of Defense or the Army. The Defense Acquisition Regulatory Council is currently considering a case for such implementation in the Federal Acquisition Regulation (FAR) and the Defense FAR Supplement. The directive issued on 21 April 1987 furnished in response to Question 1 has the effect of implementing the Policy Letter in the Army.

Army Regulation 5–21

Management

Army Policies and Responsibilities for the Arroyo Center

Headquarters
Department of the Army
Washington, DC
22 August 1986

SUMMARY of CHANGE

AR 5-21
Army Policies and Responsibilities
for the Arroyo Center

This regulation--

o Describes the Arroyo Center and its mission (paras 4 and 5).

o Establishes the Arroyo Center Policy Committee (paras 5 and 6).

o Designates the Army Executive Agent for the Arroyo Center (para 6).

o Explains the relationship between the Sponsor and the Arroyo Center in the development and execution of the Arroyo Center annual program (para 8).

Headquarters
Department of the Army
Washington, DC
22 August 1986

*Army Regulation 5–21

Effective 15 September 1986

Management

Army Policies and Responsibilities for the Arroyo Center

This UPDATE printing publishes a new regulation that is effective 15 September 1986.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

Summary. This regulation covers the policies and responsibilities for the management and administration of the Arroyo Center, a federally funded research and development center for the Department of the Army. It describes the Arroyo Center and its mission; establishes the membership on the Arroyo Center Policy Committee and designates the Army Executive Agent for the Arroyo Center; and explains the relationship between the Sponsor and the Arroyo Center in the development and execution of the Arroyo Center annual program.

Applicability. This regulation applies to all elements of the Active Army, Army National Guard, and the U.S. Army Reserve.

Impact on New Manning System. This regulation does not contain information that affects the New Manning System.

Internal control systems. This regulation is subject to the requirements of AR 11–2. It contains internal control provisions but does not contain checklists for conducting internal control reviews. These checklists are being developed and will be published at a later date.

Committee establishment approval. The DA Committee Management Officer concurs in the establishment of the Arroyo Center Policy Committee.

Supplementation. Supplementation of this regulation and establishment of forms other than DA forms are prohibited without prior approval from HQDA (DACS–DMO), WASH DC 20310–0200.

Interim changes. Interim changes to this regulation are not official unless they are authenticated by The Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested improvements. The proponent agency of this regulation is the Office of the Chief of Staff, U.S. Army. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to HQDA (DACS–DMO), WASH DC 20110–0200.

Distribution. Distribution of this issue has been made in accordance with DA Form 12–9A–R requirements for 5-series publications. The number of copies distributed to a given subscriber is the number of copies requested in Blocks 7 and 8 of the subscriber's DA Form 12–9A–R. AR 5–21 distribution is C for Active Army; D for ARNG, and D for USAR.

Contents (Listed by paragraph number)

Purpose • 1
References • 2
Explanation of abbreviations • 3
Arroyo Center • 4
Army policy for the Arroyo Center • 5
Army organization for policy and management of the Arroyo Center • 6
Responsibilities • 7
Development of the annual program • 8
Dissemination of Arroyo Center reports • 9
Arroyo Center Fellows Program • 10
Other Army interaction with the Arroyo Center • 11
Glossary

1. Purpose

This regulation defines Army policies and responsibilities for the Arroyo Center. It describes the Arroyo Center and the development of its annual program and establishes the framework for managing and directing Arroyo Center efforts.

2. References

Related publications are listed below. (A related publication is merely a source of additional information. The user does not have to read it to understand this regulation.)

a. AR 5–5, Army Studies and Analysis.

b. AR 5–14, Managing Analytical Support Services.

c. AR 380–5, Department of the Army Information Security Program.

d. DA Pam 5–5, Guidance for Army Study Sponsors, Sponsor's Study Directors, Study Advisory Groups, and Contracting Officer Representatives.

3. Explanation of abbreviations

Abbreviations and special terms used in this regulation are explained in the glossary.

4. Arroyo Center

a. The Arroyo Center is the Department of the Army's (DA) federally funded research and development center (FFRDC) for studies and policy analyses.

b. The Arroyo Center is a division of The Rand Corporation dedicated to supporting the U.S. Army. Rand is an independent, nonprofit organization devoted to research in the interest of national security and the welfare of the United States. Rand also conducts research of its own and under contract with other Government agencies. The Arroyo Center—

(1) Furnishes the Army with information and findings derived from analyses of Army technical and policy issues. Its efforts are

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*This regulation supersedes HQDA Letter 5–85–2, 1 October 1985.

cy-oriented issues and are designed to assist the Army in improving its efficiency and effectiveness.

(2) Maintains both a technical and nontechnical capability in a broad range of matters of concern to the Army. This includes the ability to address, through formal studies and analyses, a variety of problems potentially affecting Army missions and organizations, including threats, strategy, tactics, operations, technology, and resource management.

5. Army policy for the Arroyo Center

a. The Arroyo Center represents a major investment by the Army for analysis of Army policy issues. To foster innovative and objective work, the Arroyo Center management is given maximum freedom to propose new projects and to carry out the annual program approved by the Arroyo Center Policy Committee (ACPC).

b. Broad distribution of Arroyo Center results is encouraged by the Army to achieve maximum benefit, to permit widespread peer review, and to increase awareness of issues identified by the Army leadership as important.

c. The Arroyo Center will undertake projects for which it has special competence or capabilities that do not exist in the Army in-house analytical organizations or that are inappropriate for in-house performance. General criteria or characteristics for use in determining the appropriate assignment of work to the Arroyo Center include—

(1) *Unique expertise.* Tasks that require competence in specific fields, close-working relations with other Government agencies, or interdisciplinary policy analyses, where such capabilities exist at the Arroyo Center.

(2) *Long-term analysis.* Multi-year analysis not available from contractors.

(3) *Proprietary and restricted information.* Privileged access to proprietary data, competition sensitive data, or restricted data that only an FFRDC such as the Arroyo Center can obtain.

(4) *Objectivity.* Advice on alternative programs and courses of action that a nonprofit analytical organization having no conflict of interest can appropriately provide.

(5) *Special, quick response support.* Capability to deliver, on short notice, results that the Arroyo Center derives from working continually on a wide variety of Army issues.

d. All Army work for the Arroyo Center will be ordered through a single contract between the Army and the Rand Corporation. Individual Army organizations will not execute their own separate contracts with the Rand Corporation for Arroyo Center studies and analyses.

e. The Arroyo Center is entitled broad access to Army information not generally accorded to commercial contractors. Accordingly, the Army will provide the Arroyo Center with prompt and systematic access to pertinent documents, data, and briefings, consistent with security provisions [illegible] of analytical efforts. The Army will also assure that the Arroyo Center maintains current knowledge of Army goals, objectives, and ongoing study efforts.

f. Arroyo Center projects normally will be performed by Rand staff. Approval for subcontracting on specific tasks may be granted specifically and generally by the Executive Agent. Consultants may be used to add depth of knowledge and expertise that is not otherwise available to the Arroyo Center.

6. Army organization for policy and management of the Arroyo Center

a. The ACPC consists of the Vice Chief of Staff, U.S. Army (co-chairman); Assistant Secretary of the Army (Research, Development, and Acquisition) (co-chairman); Commanding General, U.S. Army Training and Doctrine Command (CG, TRADOC); Commanding General, U.S. Army Materiel Command; and Deputy Chief of Staff for Operations and Plans.

b. The ACPC Executive Agent is the Director, Study Program Management Office (SPMO), Management Directorate, Office of the Chief of Staff, U.S. Army.

c. A Sponsor is a Headquarters, Department of the Army (HQDA) or major Army command (MACOM) general officer or Senior Executive Service (SES)-level civilian under whose authority a particular analytical effort is formulated and administered. Sponsors will be provided for all approved Arroyo Center projects. Sponsors will designate a point of contact to work with the Arroyo Center personnel and the Executive Agent to ensure complete and continuous project coordination.

d. The Officer of Collateral Responsibility (OCR) is a HQDA or MACOM general officer or SES-level civilian who has an interest in a specific Arroyo Center project and who collaborates with the Sponsor on this specific project. The OCR provides advice and assistance to the Sponsor during the conduct of the project. The OCR does not function as a co-Sponsor of a project.

7. Responsibilities

a. The ACPC—

(1) Establishes overall objectives for the Arroyo Center.

(2) Provides broad supervisory and policy guidance to the Arroyo Center management.

(3) Meets regularly (at least semi-annually) with the Arroyo Center management to review and evaluate the current and planned annual programs.

(4) Provides guidance to the Arroyo Center management on Army needs, interests, and priorities.

(5) Provides access to Army and other agency information needed to conduct projects.

(6) Reviews and approves the annual Arroyo Center program in the context of the overall goals of the Army.

[illegible] Reviews and approves research projects.

(8) Provides annual program evaluation guidance to the ACPC Executive Agent.

(9) Reviews and approves Army officers and civilians for participation in the Arroyo Center Fellows Program. (See para 10.)

b. The ACPC Executive Agent—

(1) Serves as the Army point of contact for the Arroyo Center.

(2) Oversees and monitors the performance of the Arroyo Center and recommends changes to Arroyo Center policy guidelines to the ACPC.

(3) Evaluates and presents to the ACPC, information provided by Sponsors and the Arroyo Center management on individual projects and the Arroyo Center program as a whole.

(4) In coordination with the Director, Arroyo Center establishes and applies policies for initiating the annual program development. Approves all modifications to the annual program; major changes will be coordinated with the ACPC.

(5) With guidance from the ACPC, directs an evaluation of the program.

(6) Develops, coordinates, and justifies the Army requirements for the Arroyo Center during the Programming, Planning, Budgeting, and Execution System process.

(7) Develops statements of work and fund obligation instruments for the continuous operation of the Arroyo Center.

(8) Acts as the interface between the Army and the contracting officer for the contract with The Rand Corporation.

(9) Serves as a member of all study advisory groups formed for Arroyo Center efforts.

(10) Implements program management procedures to ensure full coordination of project proposals and the annual Arroyo Center program.

(11) Assures that Arroyo Center reports are reviewed by appropriate Army officials prior to public release to identify classified, proprietary, or sensitive information not authorized for release. The review is not intended to censor Arroyo Center analysis or to preclude release of information critical of the Army.

(12) Provides information on the Arroyo Center to Army, Department of Defense (DOD), and other Government agencies. Reviews requests for and releases information on the Arroyo Center to non-Government individuals or organizations.

(13) Conducts a program to periodically inform potential users throughout the Army of the capabilities of the Arroyo Center.

(14) Provides staff support to agencies outside HQDA when they are requesting or sponsoring Arroyo Center projects.

(15) Designs, implements, and maintains internal controls for the Army for the oversight management of the Arroyo Center.

(16) Provides all administrative support for the ACPC.

c. Each Sponsor—

(1) Is a general officer or SES-level civilian who is the focal point for structuring the

issues, providing guidance, and reviewing the interim and final analytical products for a specific project.

(2) Will appoint an action officer to serve as a point of contact and monitor for matters related to the conduct of the project.

(3) Will, in coordination with the Director of the Arroyo Center, assure that the project proposal is prepared and submitted to the ACPC for approval.

(4) Will advise and assist the ACPC Executive Agent in all technical and administrative matters related to the effort.

(5) Will coordinate with the OCR on all issues that involve OCR missions and responsibilities.

(6) May be a member of the ACPC.

d. Each OCR—

(1) Will provide necessary assistance and coordination to the Sponsor.

(2) Will advise and assist the Sponsor on all technical matters for which the OCR is responsible.

(3) May be a member of the ACPC.

8. Development of the annual program

a. The annual program is viewed as an evolving agenda. It specifies thematic thrusts, ongoing projects, proposed projects, and potential projects. The annual program will be developed through a continuing process involving top Army leaders and the Arroyo Center management. The process will identify and clarify policy issues seen as critical by Army leadership. It will be prepared annually by the Arroyo Center for ACPC approval.

b. Army activities as well as Arroyo Center management may recommend projects for inclusion in the Arroyo Center annual program.

c. During the preparation of proposed projects, interaction among Arroyo Center personnel, members of the requesting agency, and other interested individuals is expected.

d. Projects will be categorized according to three stages of development as follows:

(1) *Exploratory.* Efforts in this stage have been selected by the Arroyo Center for preliminary analysis.

(2) *Provisional.* This stage contains more mature research activities. Efforts have been formulated as projects and have identified sponsors but have not yet been submitted to the ACPC for review and approval.

(3) *Approved.* Efforts in this stage are mature projects that have been formally approved by the ACPC.

e. Each provisional project will be sponsored by a HQDA or MACOM general officer or SES-level civilian. An OCR may also be designated.

f. Prior to submitting provisional projects to the ACPC for approval, the Sponsor and the Arroyo Center management will develop mutually acceptable project descriptions that define the analytical effort. This will include a description of the analyses, anticipated benefits and/or impacts, an estimate of the required level of effort (professional staff years), and research milestones against which progress will be measured. Project descriptions will be forwarded to the ACPC Executive Agent for inclusion as an agenda item during the next ACPC meeting.

g. The annual program will be presented to and approved by the ACPC.

h. The Arroyo Center may devote up to 25 percent of its annual budget for exploratory and supporting analytical efforts. The Executive Agent will serve as the sponsor for these efforts if required.

i. Proposed changes in the program will be coordinated among the sponsors, the Arroyo Center management, and the ACPC Executive Agent. Substantive changes will be approved by the ACPC.

j. An Army activity may, at any time, discuss policy issues and potential projects or seek information concerning completed or ongoing Arroyo Center projects.

9. Dissemination of Arroyo Center reports

a. The Arroyo Center will provide Army Sponsors with written reports of completed projects. Results may also be disseminated through publications and briefings.

b. A master distribution list will be maintained by the ACPC Executive Agent and the Arroyo Center for use in determining distribution of Arroyo Center reports within the DOD.

c. The Arroyo Center is encouraged to make presentations to military operations research symposiums and to publish reports and articles in DOD official publications.

d. Unclassified reports, that do not contain proprietary or sensitive information, may be made available to commercial organizations and the general public subsequent to review per paragraph 7*b*(11).

e. Arroyo Center analysts are encouraged to write unclassified articles based on Army research for publication in professional journals. These articles will not contain classified, proprietary, or sensitive information and will be submitted for publication only after the Army has conducted an appropriate security review. Disclaimers will be used to indicate that the articles do not represent Army policy or viewpoints.

f. Army organizations receiving Arroyo Center publications are encouraged to review them and send constructive comments to the Executive Agent at HQDA (DACS–DMO), WASH DC 20310–0200.

10. Arroyo Center Fellows Program

a. A research and study fellowship will be established at the Arroyo Center. The purposes of this program are to—

(1) Provide DA officers and civilians the opportunity to study and work on critical, policy issues being addressed in the Arroyo Center annual program.

(2) Enhance the Arroyo Center's understanding of current Army policies and doctrine through the assignment of highly qualified DA officers and civilians to Arroyo Center projects.

(3) Promote understanding of the Arroyo Center in the Army community.

(4) Provide career enhancing development of analytical and operations research skills and techniques.

b. Volunteer Army officers (grades 04 and 05) and Army civilians (GS–12 through GS–14) will be screened and selected annually. The ACPC Executive Agent will coordinate the annual nomination and selection of Fellows for the ACPC.

c. Criteria for selection will be developed and published annually. The selection process will commence in December for the next fiscal year (FY) participants. Final selection will normally be made at the beginning of the 3rd quarter of the FY.

d. The normal tour of duty at the Arroyo Center will be one year.

e. The ACPC Executive Agent will coordinate Fellows Program administrative actions, Arroyo Center projects, and follow-on assignments to ensure maximum benefit to the Arroyo Center and the Army.

11. Other Army interaction with the Arroyo Center

a. An Analysis Coordination and Information Exchange Group (ACIEG) will be established to help assure mutually beneficial technical coordination between the Arroyo Center and the Army. The group will be headed by the Deputy Under Secretary of the Army for Operations Research and will include the Director, Study Program Management Office; Director, Concepts Analysis Agency; Commander, TRADOC Analysis Center; Director, TRADOC Analysis Center—Leavenworth; Director, TRADOC Analysis Center—White Sands; and the Director, Army Material Systems Analysis Agency. The ACIEG will meet with members of the Arroyo Center and other relevant committees to exchange information and ideas concerning ongoing and proposed projects in the analytical community, and to increase mutual understanding of problems and analytical methods. The ACIEG does not have program approval or modification authority.

b. During the project development phase of Arroyo Center efforts, the Executive Agent will identify subject matter experts and points of contact within the Army. Informal meetings will be scheduled between Arroyo Center project personnel and these experts to exchange information and effect project coordination.

c. Army activities, as authorized by the Sponsor, will provide the Arroyo Center with information (including classified material) required to complete approved projects. Army activities may release required classified, privileged, proprietary, or sensitive material directly to the Arroyo Center. Clearance for the release of classified material will be provided by Army organizational security managers. Clearance for release of industry, or other privately owned, privileged or proprietary materials will be obtained from the source of the data. Army data released to the Arroyo Center, as described herein, shall contain appropriate protective markings and non-disclosure warnings. Such data generally will not be released outside the Arroyo Center.

Glossary
Abbreviations

ACIEG
Analysis Coordination and Information Exchange Group

ACPC
Arroyo Center Policy Committee

DA
Department of the Army

DOD
Department of Defense

FFRDC
federally funded research and development center

FY
fiscal year

HQDA
Headquarters, Department of the Army

MACOM
major Army command

OCR
Officer of Collateral Responsibility

SES
Senior Executive Service

SPMO
Study Program Management Office

TRADOC
U.S. Army Training and Doctrine Command

Question 3. OFPP Policy Letter 84-1(6)(f) states that one federal agency may use another agency's FFRDC "only if the terms of the FFRDC's sponsoring agreement or contract permit work from other than a sponsoring agency."

(a) How does the Army determine whether the sponsoring agreement of another agency's FFRDC authorizes the Army to request work from that FFRDC? How did the Army make this determination for Los Alamos National Laboratory in the GeoSpectra example?

(b) For each FFRDC sponsored by DOE from which the Army has requested work since 1984, cite the relevant section and language in the FFRDC's sponsoring agreement which authorize work requests from entities other than DOE. This list should include a reference to the sponsoring agreement of Los Alamos National Laboratory, applicable to the GeoSpectra example.

Answer to Question 3a. For the Arroyo Center, the only FFRDC sponsored by the Army, determinations of the purpose, scope and mission are made in accordance with Army Regulation 5-21 (copy furnished) at the highest levels of the Army.

For FFRDC of other agencies, the Army becomes aware of the "purpose, mission and general scope of effort" through publications of the sponsoring agency, discussions with the sponsoring agency and the FFRDC.

Answer to Question 3b. There is no mechanism for the accumulation of data reflecting Army use of FFRDCs, either Defense or non-Defense sponsored. Therefore, we cannot produce a listing as desired. Generally, however, it is the practice of the Army to rely on the sponsoring agency to make the appropriate determinations.

Question 4. OFPP Policy Letter 84-1(6)(f) states that one federal agency may not use another agency's FFRDC on an agency-to-agency basis, unless the work request is processed under the Economy Act or "other statutory authority." The Economy Act permits agency-to-agency procurements only if the work "cannot be provided by contract as conveniently or cheaply by a commercial enterprise."

How does the Army determine whether a contract cannot meet its needs "as conveniently or cheaply" as an agency-to-agency procurement? Please include in your answer what standards the Army uses in making this determination and who has final decisionmaking authority.

Answer to Question 4. There are no Army regulations which deal with the Economy Act determination. The Defense FAR Supplement, binding on the Army, requires that a Contracting Officer make the required determination, but there are no standards specified.

Question 5. Does the Project Order Act, 41 U.S.C. 23, provide proper legal authority for the funds transferred by the Army and accepted by DOE in Military Interdepartmental Purchase Request (MIPR) No. W8008J-61-6253 (attached)? Please explain your answer in detail. Please include in your answer whether the Army agrees with these statements: (a) under DOD Instruction 7220.1(III)(A) and (C), the Project Order Act applies only to procurements placed with government-owned, government-operated facilities (GOGOs); and (b) Los Alamos National Laboratory is not a GOGO, but a government-owned, contractor-operated facility (GOCO).

Answer to Question 5. The Project Order Act, 41 U.S.C. 23 as implemented in the Department of Defense does not apply to Army MIPR No. W8008J-61-6253 because neither the Department of Energy nor the FFRDC in question falls within the definition of a Government-owned, Government-operated facility.

There is a more basic reason why the Act does not apply to the cited MIPR. Simply stated, the Act does not provide substantive authority for agencies to place acquisitions with Government-owned facilities. Rather, the Act merely allows agencies to obligate appropriated funds for such acquisitions in the same manner that funds may be obligated for commercial acquisitions. Agencies must look to their general procurement statute for authority to place orders with Government-owned establishments, or any other establishment for that matter.

Question 6. If the Project Order Act does not provide proper legal authority for MIPR No. W8008J-61-6253, what is the status of the $300,000 that is the subject of this funding document and what does the Army plan to do to rectify the situation?

Answer to Question 6. While the Economy Act, in conjunction with the relevant exceptions to the requirement for full and open competition in the Competition in Contracting Act (CICA), might have provided authority for MIPR No W8008J-61-6253, we are not certain that the proper findings were made under either Act. The Department of Energy (DOE), as the agency responsible for placing the Army's acquisition under the MIPR, was required to prepare documentation supporting other than full and open competition under CICA prior to executing a contract. (See 10 U.S.C. 2304 (f)(1)) The Army, in turn, was required by the same Act to ensure that the acquisition was not placed unless the DOE fully complied with CICA requirements. (See 10 U.S.C. 2304 (f)(5)(B)) The Army did not discharge this responsibility, and does not know at this time whether DOE in fact complied. In addition, it does not appear that the Army made the proper finding to support the placement of the order under the Economy Act.

Nonetheless, funds in the amount obligated were available for the purpose for which the acquisition was placed. Since the work is approximately 60 percent complete, and the requirement remains a valid one, there is no reason to disturb the MIPR.

Question 7. The current DOD form used for MIPRs does not prompt the person completing the form to identify the legal authority for the funds transfer. Improper funding actions may result. Is the Army willing to recommend that DOD amend the MIPR form to include language permitting the person completing the form to "check off" the proper funding authority? The language could be similar to this:

__ Authority for the funds transfer is the Economy Act, 31 USC 1535, which permits acquisitions from other agencies if the acquisitions are in the best interests of the United States and cannot be provided by contract as conveniently or cheaply by a commercial enterprise.

__ Authority for the funds transfer is the Project Order Act, 41 USC 23, which permits acquisitions from government-owned, government-operated facilities (GOGOs).

__ Other. Explanation: ______________________________.

If the Army is willing to recommend amendment of the MIPR form but prefers another approach to identify the legal authority for the funds transfer, please describe this alternative approach and provide a copy of any proposed MIPR form under consideration for submission to DOD.

Answer to Question 7. The Army interposes no objection to an amendment to the current MIPR form, or creation of a new form specifically for the purpose, so that the identification of the appropriate legal authority may be made thereon. However, the Project Order Act does not appear to provide authority for any such acquisition and accordingly should not be cited on the form. In addition, we believe that the Economy Act and the CICA must be complied with individually to support acquisitions of this type. The selected form can incorporate this guidance.

Question 8. DOE Order 4300.2A(8)(b) requires agencies to submit written certifications prior to DOE's assigning work requests for them to a DOE facility. Has the Army developed a form to be used for this certification? If so, please provide a copy of any draft or final form.

Answer to Question 8. The Army has no form to be used for the certification required by DOE Order 4300.2A(8)(b).

Senator LEVIN. You may be asked some additional, written questions. We will keep the record open for that purpose. We appreciate your cooperation. We thank you for appearing today.

[Material follows:]

Department of Energy
Washington, DC 20585

May 8, 1987

Honorable Carl Levin
Chairman
Subcommittee on Innovation Technology
and Productivity
Committee on Small Business
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

On April 7, 1987, Harry L. Peebles, Principal Deputy Assistant Secretary, Management and Administration appeared before the Subcommittee on Innovation, Technology and Productivity of the Committee on Small Business to discuss the work of the national laboratories with the Department of Energy.

Following the hearing, you submitted written questions for our response to supplement the record. Enclosed are the answers to those questions, which also have been sent directly to the Committee staff.

If you have any questions, please have your staff call Roger Sindelar or Tom Todd on 586-4277. They will be happy to assist you.

Sincerely,

Thomas Todd
for
Robert G. Rabben
Assistant General Counsel
for Legislation

Enclosures

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 1(a): OFPP Policy Letter 84-1 (6)(c)(1)(a) requires a federal agency who sponsors an FFRDC to delineate the FFRDC's "purpose" and to describe the FFRDC's "mission, general scope of effort...and the role the FFRDC is to have in accomplishment of the sponsoring agency's mission." Other federal rules and regulations, such as section 2367(a) of P.L. 99-661, the FY-87 defense authorization statute, contain provisions whose application depends upon determining an FFRDC's "purpose, mission and general scope of effort."

For each FFRDC which DOE sponsors, describe the FFRDC's "purpose, mission and general scope of effort" and identify the primary document setting forth this information.

Answer: (See Attachment)

Attachment

Following are the 20 FFRDCs which DOE sponsors including their purpose, mission and general scope of effort as well as their source document:

1. Princeton Plasma Physics Laboratory (PPPL) -- The PPPL has the responsibility to create the research and technology data base required for an assessment of the economic potential of fusion power. Two essential elements of this task will be the achievement of a burning D-T plasma and the demonstration of a working Engineering Test Reactor (ETR). A systematic investigation of mainline and alternate fusion reactor options is also required to provide information for an overall assessment of the potential of fusion power and to help insure that initial commercialization can proceed most efficiently.

The principal mission consists of the following elements: Investigation and experimental demonstration of the potential of the tokamak as a commercial fusion reactor; utilization of the tokamak for the study of the burning-plasma state; invention of advanced tokamak features and alternate toroidal concepts that show promise of further enhancing the economic potential of fusion power; advancement of the basic understanding of plasma physics and its practical applications; and participation in an international collaborative effort to achieve a working ETR. (Source: PPPL Institutional Plan - FY 1987-1992)

2. The Stanford Linear Accelerator Center (SLAC) -- SLAC is dedicated to research in high energy particle physics and to the development of new techniques in high energy accelerators and experimental apparatus. The center is operated as a national facility so that scientists from universities and research centers throughout the world may participate in the high energy research program.

The mission of SLAC can be summarized as follows: Provide accelerator facilities to carry out experimental research in high energy physics; provide detection devices to exploit the accelerator facilities; provide the necessary support for groups of physicists from SLAC and from other institutions to carry out experiments; carry out experimental and theoretical research in high energy physics; develop new detection techniques in order to allow new kinds of experiments to be done; develop, through accelerator R & D, methods to improve the capabilities of existing accelerators at SLAC and elsewhere; develop, through advanced accelerator R & D, the conceptual framework and technology needed to make very high energy electron-position coddlers practical and cost-effective; and assist scientists in other disciplines to exploit special opportunities that may arise from our high energy physics facilities. (Source: SLAC Institutional Plan - FY 1987-1992)

3. Fermi National Accelerator Laboratory (Fermilab) -- Fermilab provides the U.S. and the world community with a major facility for carrying out research in high-energy particle physics.

Fermilab is open for particle physics research by any qualified scientist or group of scientists. The primary mission of the Fermilab staff is to operate, maintain, and improve the Accelerator and secondary beam facilities and to provide assistance to the users in the construction, installation and operation of their experiments.

Essential to the overall goal of advancing the science of particle physics are other Laboratory activities: operation of the Central Computing Facility; construction of major detector components; and provision and maintenance of the modular electronics and 'on-line' computer pool. A number of major detectors at Fermilab are operated as facilities themselves; their maintenance and management are explicitly under Fermilab aegis rather than following the university collaborative efforts used in smaller experimental systems. (Source: Fermi Institutional Plan - FY 1987-1992)

4. Ames Laboratory (AMES) -- AMES conducts research in the physical, chemical, materials, mathematical and engineering sciences which underlie energy generating, conversion and transmission technologies and other technical areas essential to national interests. This effort will be maintained so as to contribute to the achievement of Department of Energy and other national goals and to increase the general levels of knowledge and technical capabilities. Fundamental work will be conducted to support energy technologies foreseen in the intermediate to long-range regime, novel solutions to problems associated with these technologies will be pursued, and energy-related applied research will be carried out through the proof of technical soundness.

The Laboratory will rely upon its strengths in materials preparation and processing, materials reliability, chemical analysis, chemical sciences, materials sciences, microelectronics, and applied mathematical sciences to conduct the long-term basic and intermediate-range applied research needed to solve the complex problems encountered in energy production and utilization. The internationally recognized capability at Ames for preparing ultra high purity and well characterized metals, alloys, compounds, and single crystals will be utilized to make these materials available to other DOE Laboratories, to other agencies, to universities, and to the private sector. (Source: AMES Institutional Plan - FY 1987-1992)

5. Argonne National Laboratory (ANL) -- ANL is responsible for experimental and theoretical research in fundamental problems in the physical, life, and environmental sciences to advance scientific understanding generally and to support developing of energy technologies; development and operation of national research facilities for use by university, industrial, and national laboratory groups; development and testing of advanced instruments and methods for facilities-centered research; conceptualization, design, and testing of advanced fission-reactor and other technologies for power applications in the civilian and defense sectors; and support base-technology research to devise innovative energy conversion and end-use technologies and to overcome materials, chemical, and electrochemical barriers to the development of these technologies.

To fulfill its missions and to enhance the productivity of its programs, the Laboratory works closely with the university and industrial communities. Participation by faculty and students in Laboratory programs brings university talent to bear on research problems and contributes to the education of future scientists and engineers. It is Laboratory policy that technology transfer with the private sector be an integral feature of its basic and technology-directed programs. The Laboratory actively encourages industrial participation and, where appropriate, private-sector sponsorship of its research programs. (Source: ANL Institutional Plan - FY 1987-1992)

6. Brookhaven National Laboratory (BNL) -- The role of BNL is to conceive, design, build and operate large complex research facilities for fundamental scientific studies, and to carry out both basic and applied research in energy-related physical, life and environmental sciences. In providing the use of the Laboratory's large and complex facilities to the scientific community, Brookhaven maintains close interaction with scientific personnel in universities and industry and aids the education of scientists and engineers through cooperative research programs.

To fulfill its role as a multiprogram laboratory, Brookhaven directs its scientific and technical efforts toward missions that include: (1) high energy physics, presently centered on the operation of the Alternating Gradient Synchrotron; (2) nuclear physics, with current emphasis on heavy ions, kaons, and low energy physics; (3) life sciences research and nuclear medicine, focused on fundamental life processes and their alteration by radiation and chemical pollutants, and on medical applications of nuclear techniques; (4) materials sciences, centered on utilization of the National Synchrotron Light Source and the High Flux Beam Reactor; and (5) chemical sciences, with emphasis on fundamental research into chemical and physical phenomena underlying energy-related transfer, conversion and storage systems. (Source: BNL Institutional Plan - FY 1987-1992)

7. Lawrence Berkeley Laboratory (LBL) -- LBL provides national scientific leadership and support technological innovation through its mission to: perform leading multidisciplinary research in general sciences and energy sciences; develop and operate unique national experimental facilities for use by qualified investigators; educate and train future generations of scientists and engineers; and foster productive relationships between LBL research programs and industry.

The following areas of research excellence implement this mission and provide current focus for achieving DOE goals:

Accelerator and Fusion Research - accelerator design and operation, advanced accelerator technology development, accelerator and ion source research for heavy-ion fusion and magnetic fusion, and x-ray optics; Nuclear Science - relativistic heavy-ion physics, medium- and low-energy nuclear physics, nuclear theory, nuclear astrophysics, nuclear chemistry, transuranium elements studies, nuclear data evaluation, and detector development; Physics - experimental and theoretical particle physics, detector development, astrophysics, and applied mathematics; Applied Science - building energy efficiency, solar for building systems, fossil energy conversion, energy storage, and atmospheric effects of combustion; Biology and Medicine - molecular and cellular biology, diagnostic imaging, radiation biophysics, therapy and radiosurgery, mutagenesis and carcinogenesis, lipoproteins, cardiovascular disease, and hemopoiesis research; Center for Advanced Materials - catalyts, electronic materials, ceramic and metal interfaces, polymer research, instrumentation, and metallic alloys; Chemical Biodynamics - molecular biology of nucleic acids and proteins, genetics of photosynthesis, and photochemistry; Earth Sciences - continental lithosphere properties, structures and behavior, and transport processes in geologic systems; and Material and Molecular Research - microstructures, electron microscopy, surfaces, and interfaces; solidstate and atomic physics; chemical energy, and reaction dynamics. (Source: LBL Institutional Plan - FY 1987-1992)

8. Oak Ridge National Laboratory (ORNL) -- ORNL is responsible for carrying out applied research and engineering and development in fusion, fission, and other energy technologies and scientific research in fundamental physical and life sciences to underpin work in the energy technologies. A secondary mission of the Laboratory is to use its resources to address other nationally important issues, such as hazardous and chemical wastes and non-nuclear defense technologies, when such work is closely related to the primary mission. In keeping with these missions, ORNL serves as a resource for the Department of Energy (DOE) by providing the technical knowledge needed to develop a sound, stable energy program and assists DOE in defining a comprehensive nuclear-energy program to meet short-term and long-term national needs. In addition, ORNL designs and operates research facilities for the benefit of members of the scientific and technical community and supplies radioactive and stable isotopes that are not available from the private sector.

To fulfill its missions, ORNL focuses its scientific and technical efforts on (1) magnetic fusion, with emphasis on applied plasma physics, experimental and design studies of confinement configurations, development of plasma heating and fueling systems, development of superconducting confinement magnets, and testing of candidate first-wall and blanket materials; (2) nuclear fission, with emphasis on development of nuclear fuel reprocessing, technologies for advanced nuclear power reactors with special emphasis on materials, instrumentation and controls, and robotics, and technologies for managing nuclear and chemical waste; (3) biological and environmental basic and applied research, with emphasis on the interaction of energy-related physical and chemical agents with living organisms; (4) conservation and renewable energy, with emphasis on generic research for high-temperature materials, power systems, biomass production, energy storage, and technology development for building and industry; (5) fossil energy, with emphasis on materials, environmental control technologies, and environmental safety and health research; and (6) basic research in physical sciences, with emphasis in materials research on radiation effects, neutron scattering, and surface physics.

in chemical sciences on aqueous solutions, and in nuclear physics on heavy-ion reactions. In addition, ORNL maintains close interactions with scientific and technical personnel in universities and industry. (Source: ORNL Institutional Plan - FY 1987-1992)

9. Pacific Northwest Laboratory (PNL) -- The primary mission of PNL is technology development and deployment, working throughout the technological continuum from basic science to technology applications. PNL has two principal roles to fulfill in carrying out this mission. First, as a DOE multiprogram research laboratory, PNL develops and deploys technology for energy stability, for national defense, and to enhance the international competitiveness of the United States. Second, as the research and development laboratory for the Hanford site, PNL conducts strategic planning, advanced technology development, and environmental programs to support present and future Hanford missions. These roles are complementary. The synergism in these roles is that PNL's interdisciplinary scientific and engineering approach produces results that enhance operations at Hanford, at other DOE sites, and are applied commercially by industry. PNL applies a project-oriented multidisciplinary approach using a combination of government-owned and Battelle-owned facilities to carry out this mission. (Source: PNL Institutional Plan - FY 1987-1992)

10. Oak Ridge Associated Universities (ORAU) -- ORAU is dedicated to solving problems related to energy and its associated health and environmental issues; its tools are education, training and research. It serves as a broker between people, programs and institutions, bringing together the intellectual and physical resources of private and public agencies, academe, and private industry to answer questions that would be difficult for any single group or institution to address.

Originally created to serve as a "window" into the Oak Ridge National Laboratory for academic researchers eager to learn about the then emerging nuclear sciences, it has since gone well beyond the raison d'etre for its beginnings. This is reflected in the change of its name in 1966 from the Oak Ridge Institute for Nuclear Studies to the Oak Ridge Associated Universities. ORAU is best described today as a "mini-laboratory"...a microcosm of a major multi-program DOE laboratory. It is not a single-purpose laboratory, despite its size relative to such giants as BNL, ANL and ORNL.

Recently, its role in providing services to DOE and other Federal agencies has grown. These services range from nuclear site survey work for DOE and NRC, assisting other Federal GOCO's in the development of training programs, to coordinating the organization of review panels for DOE/NE. (Source: ORAU Institutional Plan - FY 1987-1992)

11. Solar Energy Research Institute (SERI) -- The mission of SERI is to be the Nation's primary federal laboratory for solar energy research and to perform functions assigned by the Department of Energy in research, development, and testing. SERI carries out its mission by conducting and coordinating research and development on solar technologies, which private industry cannot reasonably be expected to undertake. This work advances scientific understanding and establishes

a sound technical base, enabling the private sector to make well-informed choices among technology options. General guidance is provided by the National Energy Policy Plan; specific direction is provided by year-to-year authorizing documents.

With appropriate guidance from DOE, SERI identifies promising research objectives and areas of research need. The Institute performs renewable energy research and development in direct support of the national energy strategy, to achieve a balanced and mixed national energy resource system.

The activities of the Institute include: conducting in-house and subcontracted research; DOE-assigned management and program coordination responsibilities; collaborative research efforts with industry, university, and other federal laboratory researchers; facilitation of user access to its specialized facilities and equipment; conducting a technology transfer program; and provision of scientific and technical information on renewable energy to government, user agencies, and user industries.

These areas are both complementary to and supportive of the related roles and activities of the universities, other national laboratories and research organization, and industry. The Institute is working aggressively to strengthen its interactions with potential industry users in order to transfer the scientific and technical knowledge base. This will enable informed public and private decisions to be made regarding the use of renewable resources, thereby promoting the nation's economic well-being, environmental quality, and energy security. (Source: SERI Institutional Plan - FY 1987-1992)

12. Los Alamos National Laboratory (LANL) -- LANL has the responsibility to be a national resource of scientific, technical, and engineering capabilities focused on execution of the primary national security programs; and to undertake those multidisciplinary fundamental and applied research and development activities that complement and enhance our capabilities for national defense, energy, and basic research programs.

LANL maintains a leading position in the broad range of scientific and technical fields necessary to accomplish their mission to develop: nuclear warheads for the nation's defense; new concepts for defending against nuclear attack; non-nuclear ordnance for the Department of Defense; arms control technology; basic nuclear science and particle physics; advanced fission and fusion concepts; fossil, renewable, and geothermal energy concepts; health and medical technologies; basic environmental concepts and chemical concepts and technologies, and advanced computation systems and methods. (Source: LANL Draft Institutional Plan - FY 1987-1992)

13. Lawrence Livermore National Laboratory (LLNL) -- The mission of LLNL is to be a national resource of scientific, technical, and engineering capability, that especially focuses on national security. LLNL undertakes the multidisciplinary fundamental and applied research and development activities that are necessary to maintain a leading

position in the diverse scientific and technical fields required for this mission. It interacts closely with scientific and technical personnel in universities and industry. Specific major programs include: The research, development, and test activities associated with the nuclear design aspects of all phases of the nuclear weapon life cycle, and associated national security related tasks; inertial confinement fusion, especially the short-wavelength driver approach, which is aimed initially at weapons physics understanding and, eventually, civilian power; magnetic mirror fusion; biological, ecological, and atmospheric aspects of energy and weapon technologies; Atomic Vapor Laser Isotope Separation; other energy research programs, and support to the U.S. intelligence community, the Department of Defense, the Nuclear Regulatory Commission, and other Federal agencies. (Source: LLNL Draft Institutional Plan - FY 1987-1992)

14. Idaho National Engineering Laboratory (INEL) -- INEL conducts applied research and development in support of DOE's mission. The INEL also maintains for the Government the capability to provide independent scientific advice, and technical verification and validation in the areas of its expertise. The INEL provides use of its unique facilities for the benefit of members of the technical community, cooperates with personnel in universities and industry to aid in the education of scientists and engineers, and provides technology transfer to the public and private sectors.

To fulfill its role as a multiprogram Defense Programs Laboratory, the INEL focuses its engineering and technological efforts on defense-related nuclear materials production centered largely on receipt, storage, and processing of spent fuels, and management of resulting wastes; defense-related reactor technology development; and irradiation operations and associated programs in materials testing, isotope production, and irradiation services. The INEL also provides waste management and waste technology development for the low level and transuranic waste programs, spent fuel transportation/equipment for the Office of Civilian Radioactive Waste Management, and support to the Nuclear Regulatory Commission (NRC), the Department of Defense (DOD), and other Federal agencies.

The INEL has been designated the lead laboratory for the Low-Level Waste Management Program (Nuclear Energy and Defense Program), the Transportation Technology Program for the Office of Civilian Radioactive Waste Management, the Multimegawatt Terrestrial Power Plant Project, the Multimegawatt Space Reactor, the Fusion Reactor Safety Program, the Electric Vehicle Program, and the Geothermal Reservoir Technology Program. (Source: INEL Draft Institutional Plan - FY 1987-1992)

15. Sandia National Laboratory (SNL) -- SNL applies its scientific, technical, and engineering capabilities to the execution of its primary mission, which is national security, with principal emphasis on nuclear weapon development and engineering. In the process of carrying out this mission, Sandia has evolved into a multiprogram laboratory pursuing broad aspects of national security issues. It undertakes multidisciplinary fundamental and applied research and development

activities necessary to maintain a leading position in the broad range of scientific and technical fields required for its mission, and maintains close interaction with scientists and engineers in universities, industry, and other laboratories.

To fulfill its mission, it applies its scientific and technical capabilities to: (1) research and development associated with weapon engineering for all phases of the nuclear-weapon life cycle, including inertial-confinement fusion and nuclear concepts for the Strategic Defense Initiative; (2) other national security-related tasks of nuclear materials safeguards and security, treaty verification and control, intelligence on foreign technologies and weapon systems, defense waste management, and programs in support of the Department of Defense; and (3) research and development on (a) fossil fuels including coal, oil, and gas; (b) conservation and renewable energy, focused largely on solar energy; (c) nuclear energy, principally in waste management, and reactor safety and reliability in support of the Nuclear Regulatory Commission; (d) magnetic-confinement fusion energy, mainly on plasma/material interactions; and (e) fundamental energy research related to combustion, geosciences, and material sciences. (Source: SNL Draft Institutional Plan - FY 1987-1992)

16. Savannah River Laboratory (SRL) -- The mission of SRL is to support the Savannah River Plant (SRP), which is the Nation's only facility for producing plutonium, tritium, and heavy water (produces all three). The plant is also a major producer of radioisotopes. In 1950, the Atomic Energy Commission requested that DuPont design, build, and operate the Savannah River Plant for the production of nuclear materials needed for national defense. SRP facilities include: five nuclear reactors that use heavy water as both coolant and moderator. (When product demand could be supplied with three reactors, two reactors are placed in standby. However, one of the standby reactors is currently being renovated for return to service.); two separations plants to recover the plutonium, tritium, and other isotopes from reactor-irradiated fuel and target assemblies; a plant to produce fuel and target assemblies; and a plant to produce heavy water. (Source: SRL Institutional Plan - FY 1982-1987).

17. Bettis Atomic Power Laboratory (BAPL) -- BAPL established in 1959, is devoted exclusively to the Naval Nuclear Propulsion Program and includes two sites. Bettis, the principal site, located at West Mifflin, PA, performs research and development of naval nuclear propulsion plants. The Naval Reactors Facility, located within the Idaho National Engineering Laboratory site, operates three prototype naval reactor plants and a facility for examining expended naval reactor cores. (Source: Capsule Review of DOE R&D and Field Facilities - September 1986)

18. Knolls Atomic Power Laboratory (KAPL) -- KAPL was established in 1957 and is devoted exclusively to the Naval Nuclear Propulsion Program. KAPL includes three sites. The principal site is in Niskayuna, Schenectady County, New York, where the mission is the design and development of improved naval nuclear propulsion plants and reactor cores in a wide range of power ratings designed to meet

military requirements of the Department of Navy. KAPL also operates four land-based prototypes of shipboard pressurized-water reactor plants at the Kenneth A. Kesselring site in nearby West Milton, New York, and one prototype at the Windsor site, in Windsor, Connecticut. KAPL is also responsible for training officers and enlisted personnel as reactor operators for the nuclear fleet at the prototype sites. (Source: Capsule Review of DOE R&D and Field Facilities - September 1986).

19. Hanford Engineering Development Laboratory (HEDL) -- HEDL is committed to the development of Liquid Metal Reactors (LMRs), including the operation and development of LMR fuels and materials and research and engineering development of advanced nuclear power concepts. The 400 MWt Fast Flux Test Facility at HEDL is the most advanced test reactor in the world and DOE's major test bed for LMR development. The special materials expertise of the laboratory supports the development of special reactor materials for fusion and space nuclear applications. Other HEDL expertise involves passive reactor safety, fuel cycle and engineering development of remotely operated systems and components. (Source: Capsule Review of DOE R&D Field Facilities - September 1986).

20. Energy Technology Engineering Center (ETEC) -- ETEC, founded in 1966, provides management, engineering, testing, consultation and project monitoring services for a wide range of DOE programs. ETEC tests components being developed for the U.S. liquid metal reactor program. Liquid metal test facilities are maintained and operated for evaluating components such as heat exchangers, steam generators, pumps, valves, piping, vessels and instrumentation. In addition to the reactor component testing program, ETEC provides engineering support, technical management and fusion energy programs. ETEC facility and capability users other than DOE include the Department of Defense, Nuclear Regulatory Commission and Electric Power Research Institute. (Source: Capsule Review of DOE R&D and Field Facilities).

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 1(b): Is it DOE's policy to set forth an FFRDC's "purpose, mission and general scope of effort" in the sponsoring agreement between it and the contractor selected to manage the FFRDC? If not, please explain why.

Answer: The purpose, mission, and general scope of effort are provided in the Contract and Institutional Plan for the particular laboratory.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 2(a): DOE Order 4200.2A(8) states that DOE facilities may perform work for non-DOE entities only if the work is "consistent with and complementary to DOE's mission and the mission of the organization to which work is to be assigned."

For purposes of applying this DOE order to research projects sought by other agencies, what is "DOE's mission"?

Answer: The mission of the Department is to support basic research, energy technology development, and national security, and to carry out other functions that benefit the Federal Government and the American public. Though varied in nature, research and energy technology development both concentrate on the longer term. Some programs have no direct application to energy, but examine the basic constituents of matter. Others directly seek to increase energy supplies or to improve energy efficiency; they involve research and, in some cases, development in conservation, renewable resources, fossil, nuclear and fusion energy. Still other programs focus on defense R&D and on naval nuclear propulsion systems. Finally, DOE stresses its concern for the environment, for the health and safety of workers, and for the disposal of civilian and defense nuclear wastes. Promising technologies are sought for storing, handling, and disposing of wastes; and remedial actions are carried out for stabilizing, decontaminating, and decommissioning departmental and certain nongovernment facilities where radioactive contamination has been found.

The total mission is established by enabling legislation (the Atomic Energy Act of 1954, the Energy Reorganization Act of 1974, the DOE Organization Act of 1977 and other applicable laws, regulations and Executive Orders) and amplified each year by the Congress through approval of DOE Appropriations legislation and other legislation that assigns work to the Department.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 2(b): If the "organization" to which work is to be assigned is an FFRDC, is the "mission of the organization" intended to be equivalent to the FFRDC's "mission" as defined in response to OFPP Policy Letter 84-1? If not, please explain why.

Answer: Yes, the appropriate contracts and Institutional Plans which describe the mission of the DOE laboratories meet the requirements of OFPP Policy Letter 84-1.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 2(c):	For purposes of applying this DOE order to future research requests by the Army, please describe "the mission" of Los Alamos National Laboratory.

Answer: The mission of the Los Alamos National Laboratory (LANL) as described in the executed contract and the Institutional Plan is as follows:

LANL Contract Scope of Work

Work under this contract shall, in general, comprise research, development, and educational activities related to the nuclear sciences and the use of energy in mutually selected military and peaceful applications, engineering services, and such other activities as the parties may agree upon from time to time, including operations both at the Laboratory and at such other sites as have been or may be agreed upon by the parties hereto either within or without the continental limits of the United States.

Due to the critical character of the work from the standpoint of the national defense and security, it is understood by the parties hereto that very close collaboration will be required between the University and the DOE with respect to direction, emphasis, trends and adequacy of the total program.

LANL Institutional Plan

LANL has the responsibility to be a national resource of scientific, technical, and engineering capabilities focused on execution of the primary national security programs; and to undertake those multidisciplinary fundamental and applied research and development activities that complement and enhance our capabilities for national defense, energy, and basic research programs.

LANL maintains a leading position in the broad range of scientific and technical fields necessary to accomplish their mission to develop: nuclear warheads for the nation's defense; new concepts for defending against nuclear attack; non-nuclear ordnance for the Department of Defense; arms control technology; basic nuclear science and particle physics; advanced fission and fusion concepts; fossil, renewable, and geothermal energy concepts; health and medical technologies; basic environmental concepts and chemical concepts and technologies; and advanced computation systems and methods.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 3: The sponsoring agreement for Los Alamos National Laboratory contains the following section on "scope of work":

> Nature and Scope of Program. Work under this contract shall, in general, comprise research, development, and educational activities related to the nuclear sciences and the use of energy in mutually selected military and peaceful applications, engineering services, and such other activities as the parties may agree upon from time to time . . ."

Is this "scope of work" statement equivalent to the "purpose, mission and general scope of effort" of the laboratory for purposes of OFPP Policy Letter 84-1 and to the "mission" of the laboratory for purposes of DOE Order 4300.2A? If not, please explain why, identify the differences, and describe what effect these differences have on the application of federal rules and regulations on FFRDCs.

Answer: Yes, the contract scope of work and the Institutional Plan describes the purpose, mission and general scope of effort as required by OFPP Policy Letter 84-1.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 4(a): OFPP Policy Letter 84-1(6)(f) governs when one federal agency may use another federal agency's FFRDC. It states that such work may be handled on an agency-to-agency basis only if the request "clearly fall[s] within the purpose, mission, and general scope of effort established by the sponsoring agency for the FFRDC."

For purposes of OFPP Policy Letter 84-1(6)(f), how does DOE determine whether another agency's work request "clearly fall[s] within the purpose, mission and general scope of effort" of the FFRDC asked to perform the work?

Answer: A request for work is subjected to multiple DOE reviews by the Contracting Officer, the Program officials, the legal staff and, in some DOE Operations Offices, by a formal multidisciplinary panel in which the requested work is compared to on-going work at the laboratory to assure that the work is within the scope defined by the Contract and the Institutional Plan.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 4(b):	The OFPP Policy Letter permits an agency to use another agency's FFRDC only if the work "clearly" falls within the FFRDC's "purpose, mission and general scope of effort." DOE Order 4300.2A(8) permits another agency to use a DOE-sponsored FFRDC only if the work is "consistent with and complementary to" the FFRDC's "mission." Does DOE intend these standards to be equivalent? If not, please explain which is broader and why DOE has deviated from the OFPP Policy Letter standard.
Answer:	DOE considers these standards to be essentially the same.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 4(c): If an agency asks DOE to have a DOE-sponsored FFRDC perform work, does DOE routinely notify that agency of the FFRDC's "purpose, mission and general scope of effort"? If not, does it intend to do so in the future?

Answer: No. DOE does not routinely notify a requesting agency of its laboratories purpose, mission and general scope of effort. However, during preliminary discussions, this would be included in the agenda. In the future, DOE does intend to make this known and we are currently determining the most effective and efficient method of accomplishing this.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 5: DOE Order 5000.1(5)(c) states, in essence, that work may be assigned to a laboratory like Los Alamos National Laboratory (LANL) instead of a private firm only when the work requires skills or facilities uniquely available at the laboratory, the work is not within the capability and interest of industry, or the work meets an urgent national research and development need. DOE has testified that at the time it accepted the Army's request to use LANL to perform the project that is the subject of MIPR No. W8008J-61-6253, it was unaware of the Army's solicitations of private firms such as GeoSpectra to do the same work. Now that DOE has become aware of the facts, what is its position, in light of work which should be assigned to one of its FFRDCs? Please explain your answer in detail.

Answer: DOE must carefully follow the procedures of DOE Order 4300.2A (12-19-86), which requires that, prior to such work being undertaken, the Responsible Contracting Officer must certify in writing that a determination has been made that such action will not place the facility in direct competition with the domestic private or public sectors, as well as other findings. In addition, the requesting agency must also submit to DOE a written statement of its determination that the use of the DOE facility is in compliance with the requirements of the Atomic Energy Act, the Economy Act, and other applicable Federal laws and regulations. The Responsible Contracting Officer is the DOE official responsible for administering the DOE facility contract.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 6: For each FFRDC that DOE sponsors, please identify the expiration date of the current sponsoring agreement and whether DOE is contemplating changing the research center's "purpose, mission and general scope of effort."

Answer: The following is a listing of the 20 DOE sponsored FFRDC's and the expiration dates of the current contracts:

	FFRDC	Expiration Date
1.	Princeton Plasma Physics Laboratory	09/30/91
2.	Stanford Linear Accelerator Center	09/30/87
3.	Fermi National Accelerator Laboratory	12/31/91
4.	Ames Laboratory	09/30/88
5.	Argonne National Laboratory	09/30/88
6.	Brookhaven National Laboratory	12/31/87
7.	Lawrence Berkeley Laboratory	09/30/87
8.	Oak Ridge National Laboratory	09/30/89
9.	Pacific Northwest Laboratory	09/30/89
10.	Oak Ridge Associated Universities	09/30/87
11.	Solar Energy Research Institute	09/30/88
12.	Los Alamos National Laboratory	09/30/87
13.	Lawrence Livermore National Laboratory	09/30/87
14.	Idaho National Engineering Laboratory	09/30/91
15.	Sandia National Laboratory	09/30/88
16.	Savannah River Laboratory	09/30/89
17.	Bettis Atomic Power Laboratory	09/30/88
18.	Knolls Atomic Power Laboratory	09/30/88
19.	Hanford Engineering Development Laboratory	09/30/91
20.	Energy Technology Engineering Center	09/30/88

At this time DOE is not contemplating changing the purpose, mission and general scope of effort of these FFRDCs. However, at the time of the extend-compete review of the FFRDCs' contracts, appropriate changes will be considered with respect to OFPP Policy Letter 84-1 and DOE Order 4300.2A.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 7(a): The sponsoring agreement between DOE and the University of California for management of LANL expires in 1987.

Assuming the contract is renewed, will there be any change in the "purpose, mission and general scope of effort" of the laboratory? If so, what changes are being considered, what is the basis for them, and how does DOE plan to meet the requirements of OFPP Policy Letter 84-1(6)(d)?

Answer: No major changes to the currently used language describing the purpose, mission, and general scope of effort for LANL are contemplated at this time. However, some additional controls with regards to performing the work for others are being proposed in the form of a new clause entitled "Use of DOE Facilities for Work for Others". This clause states that the laboratory shall only perform work if it is related to the mission or within any special capabilities of the laboratory and that the performance of work shall be subject to the provisions of the contract and applicable DOE rules and regulations. We believe the improved contract language, and the recently revised DOE Order 4300.2A better meets the requirements of OFPP Policy Letter 84-1.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 7(b): Assuming the contract is renewed, will a section be added to the agreement governing the use of LANL by other federal agencies as required by OFPP Policy Letter 84-1(6)(f)?

Answer: Yes. To better meet the requirements of OFPP Policy Letter 84-1, a new clause "Use of DOE Facilities for Work for Others" is being proposed for inclusion in the contract. This clause specifically states that the laboratory shall only perform work if it is related to the mission or within any special capabilities of the laboratory and that the work is subject to the provisions of the contract and other applicable DOE rules and regulations. We believe, the improved contract language, and the recently revised DOE Order 4300.2A better meets the requirements of OFPP Policy Letter 84-1.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 8: Does the Project Order Act, 41 U.S.C. 23, provide proper legal authority for the funds transferred by the Army and accepted by DOE in Military Interdepartmental Purchase Request (MIPR) No. W8008J-61-6253 (attached)? Please explain your answer in detail. Please include in your answer whether DOE agrees with these statements: (a) under DOE Order 2100.10(14) (b) and DOD Instruction 7220.1 (III) (A) and (C), the Project Order Act applies only to procurements placed with government-owned, government-operated facilities (GOGOs); and (b) Los Alamos National Laboratory is not a GOGO, but a government-owned, contractor-operated facility (GOCO).

Answer: No. DOE views the Project Order Act, 41 U.S.C. 23, as the legal basis for obligating funds when work is performed by DOE for one of the Military Departments. The authority for DOE to accept work from other agencies, including the Army, stems from the Economy Act, the Atomic Energy Act, and other authorizing legislation.

(a) DOE Order 2100.10 (14)(b)(1) dated 10-17-83 is not consistent with the law in its statement referring to a "Government-owned and Government-operated" establishment; it is therefore, being amended to state that Project Order Agreements are agreements which Military Departments enter into with DOE for ordering work and materials subject to the provisions of the Project Order Act (41 U.S.C. 23). This more accurately reflects the provisions of the law and eliminates the inconsistent reference within the current DOE Order 2100.10. We cannot offer judgement with regards to DOD Instruction 7220.1.

(b) LANL is a GOCO, not a GOGO.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 9: If the Project Order Act does not provide proper legal authority for MIPR No. W8008J-61 -6253, what is the status of the $300,000 that is the subject of this funding document and what does DOE plan to do to rectify the situation?

Answer: The legal authority for the Department to accept work is the Economy Act. Although this Act was not specifically cited in the referenced MIPR, it is recognized as the fundamental legal authority for DOE's doing work for other Federal agencies. In addition, E.O. 12333 directs DOE to provide expert technical, analytical, and research capability to other agencies in the intelligence community. The MIPR requests the work to be done, certifies the availability of funds, and obligates funds in accordance with the Project Order Act (41 U.S.C. 23).

Approximately one-half of the allocated funds have been expended. The Army has informed us that the work is important to their mission and they desire to complete this task. They believe there is a valid agreement between the Army and DOE and that the work is within the mission of DOE and the laboratory. DOE plans to continue to support the Army, but we are taking actions to assure that future work accepted by the Department is in strict compliance with the appropriate DOE orders, laws and regulations.

QUESTION FROM SENATOR LEVIN

DOE SPONSORED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Question 10: Subsections (a) and (b) of DOE Order 4300.2A(8) require certain written certifications prior to DOE's assigning work to a DOE facility for a non-DOE entity. Please provide copies of any draft or final DOE form being considered for obtaining these certifications.

Answer: DOE is not considering any Department-wide forms for the written certifications at this time. However, we are consulting with our field offices on this matter to assure that proper documentation is included in the official contract files.

Los Alamos
Los Alamos National Laboratory

International Technology Division
P O Box 503 Los Alamos, New Mexico 87544

31 March 1987

The Honorable Senator Carl Levin
Chairman
Subcommittee on Innovation,
Technology & Productivity
United States Senate
Committee on Small Business
Washington, DC 20510-6350

Dear Senator Levin:

In response to your questions of 24 March 1987, the following answers have been prepared. To facilitate the response, each question is repeated and the answer follows.

1. Q. Did LANL approach MSIC and ask to perform the work described in the attached MIPR or did MSIC approach LANL and ask LANL to perform this work?

   A. MSIC approached LANL.

2. Q. Did LANL suggest the sum of $300,000 to perform the work described in the attached MIPR or did MSIC suggest this sum? If LANL suggested the sum of $300,000, how did it arrive at this figure?

   A. MSIC suggested the sum of $300,000.

3. Q. Has any written statement of work, other than that contained in the MIPR, been formally agreed to by LANL and MSIC? If so, please provide a copy of this work statement and the date that their agreement was finalized.

   A. Yes. I have attached "Unsupervised Classification of Landsat Data; A Proposal Submitted to Missile Intelligence Agency," December 1986.

4. Q. Does LANL intend to issue a subcontract to any person or entity to perform any portion of the work required by the MIPR? If so, please identify the work which may be performed under subcontract, the estimated cost of such work and the parties under consideration.

   A. No. However, Dr. Vincent of GeoSpectra was paid $1300 under this MIPR for expenses and fee in conjunction with a consultant trip to LANL on October 27, 1986. His name was suggested as a possible consultant by MSIC on September 10, 1986.

5. Q. Were the procedures that were followed for the award of this project similar to the procedures that are used with regard to other projects awarded to LANL by DOE? If not, please identify any differences.

   A. Yes, they were similar to the procedures that are used with regard to other intelligence projects awarded to LANL by DOE.

6. Q. To the extent you are familiar with the capabilities of private firms in this field, does GeoSpectra, Inc. or any other private firm have the necessary expertise and equipment to perform the work required by the MIPR?

   A. I am sorry, but I am not in a position to answer this question.

7. Q. What is the current status of the project at LANL? Is substantive work underway?

   A. A total of approximately 5 man-months have been devoted to the MSIC work, which was initiated in October 1986. The project is 1/3 completed. Over 5000 lines of computer code have been written, and a technical publication "Monte Carlo Method for Color Image Compression" is in preparation for review and publication.

I hope these answers will be useful to the Subcommittee's hearing. If further information is required please contact me at 505/667-6922.

Sincerely,

Michael Cannon

Michael Cannon

TMC:kfa

Enc. "Unsupervised Classification of Landsat Data; A Proposal Submitted to Missile Intelligence Agency," 12/17/86

Cy: IT Files

Unsupervised Classification of Landsat Data

A Proposal Submitted to Missile Intelligence Agency

by

James White and Michael Cannon
Los Alamos National Laboratory

GOAL

Our goal is to develop and implement algorithms to categorize ground cover using Landsat Thematic Mapper (TM) data, Digital Terrain Elevation data (DTED), and meteorological (MET) data. Ideally, all ground cover will be placed into one of ~~8~~ 9 general categories: urban area, ~~trees~~ con, [illegible] + deciduous, water, grassland, swampland, or bare ground. The algorithms will require as little operator intervention as possible, and will provide as ~~an~~ accurate accuracy ~~in~~ an assignment as current technology will allow. (The resulting categorized data will be geometrically registered with DTED.)

To be "corrected" by Pete

GENERAL APPROACH

We propose a primary and a secondary approach to the problem. The primary approach is outlined in the accompanying figure. We will first correct the Thematic Mapper data for atmospheric and solar illumination variations to obtain "normalized" Landsat data. We will then create and apply four "masks" that will subdivide the categorization problem into four subproblems: vegetation, water, clouds, and other. The exact contents of these four classes can be seen in the figure. Two of these classes, water and clouds, are probably easily identified. The remaining classes, vegetation and other, are more difficult.

The pixels that fall into the "other" category may be identified with Digital Feature xxx Data (DFAD), which is available from DMA. However, it may be necessary to augment this approach with the spectral clustering approach that will be used on the first category, vegetation.

Correct identification of pixels that fall into the vegetation category will be the most difficult part of this project. We propose a spectral clustering approach, albeit one that is more sophisticated than usual. The initial clustering will be done in a standard manner on categorized training sets of data. After the spectral clusters are obtained, they will be grouped together in a chaining operation that will minimize the resulting errors in vegetation categorization. A novel enhancement of the clustering algorithm will be the association of special attributes to the spectral clusters. These attributes will include (but not be limited to) latitude, longitude, sun angle, and elevation. The inclusion of these additional attributes to the spectral cluster information will be needed to identify identical ground features that may acquire differing spectral signatures due to varying geographic location.

The enhanced spectral clustering algorithm constitutes the primary approach to the ground cover categorization problem. We will simultaneously pursue a secondary approach based upon the artificial intelligence work of Jan Mycielski and Vance Faber. The Mycielski/Faber algorithm operates initially on a training set of raw data and categorized data. The algorithm attempts to "learn" the relationships between the raw and categorized data and parameterizes these relationships in such a way that new raw data can be correctly and automatically categorized. The artificial intelligence approach can be applied to the above four subproblems separately as needed. Most of the cost of this secondary approach will be borne by internal Los Alamos research funds.

[illegible] to add
e.c.
validation →

DELIVERABLES

1. algorithms & computer code + instructions to categorize the land cover
2. implement on MTSC computers
3.

1) paragraph per person
overnight to

PARTICIPANTS

The project participants will be James White, Michael Cannon, Thomas Kyle, Richard Fortson, and Vance Faber.

COST

This will be a 16 man-month effort and will cost $300k, which includes all labor, materials, and computer costs.

GOVERNMENT FURNISHED EQUIPMENT

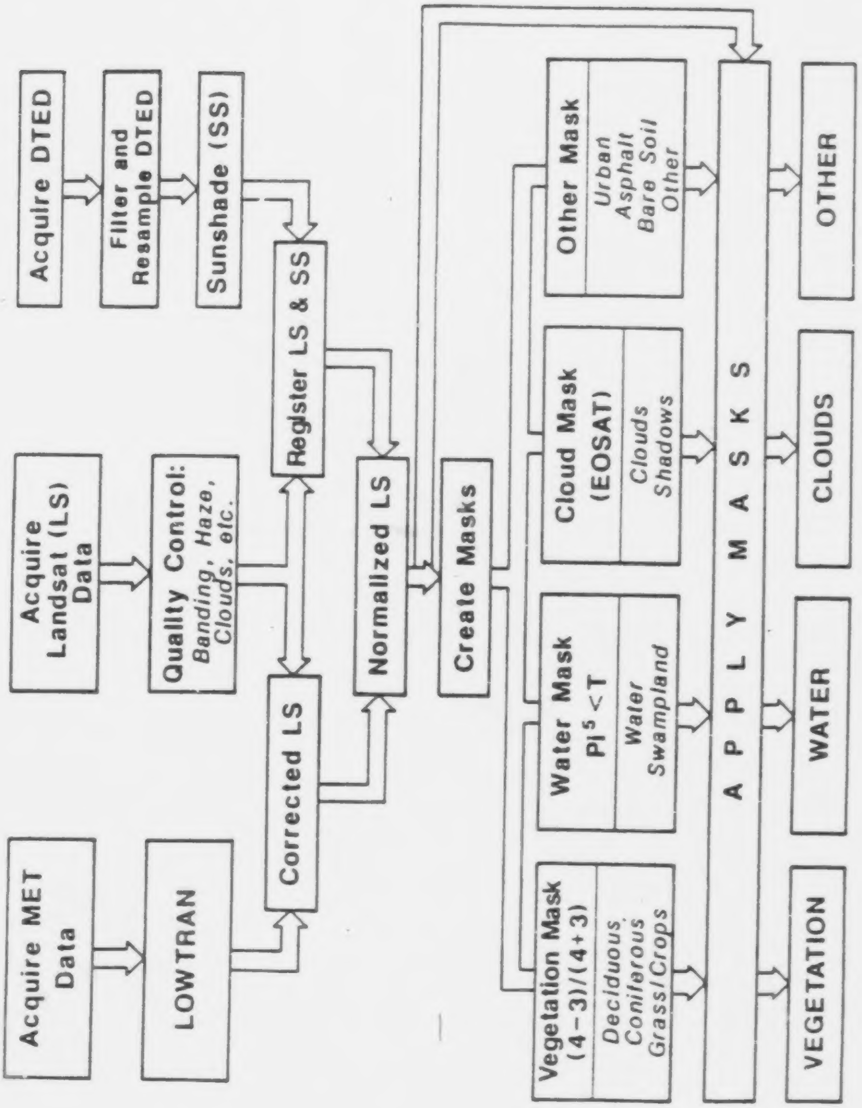
The sponsor is required to supply all required DTED, DFAD, and Landsat training set data.

1228C

~~James H. K.~~
~~Director~~
James H. Kirkland
826 ~~Lake~~ Lankell ~~[illegible]~~ Avenue
Huntsville, Alabama ~~35082~~ 35802

(205) 883-7696

meetings here as progress made.
especially interested in Faber approach.


Acquire MET Data
LOWTRAN
Corrected LS
Acquire Landsat (LS) Data
Quality Control: Banding, Haze, Clouds, etc.
Normalized LS
Acquire DTED
Filter and Resample DTED
Sunshade (SS)
Register LS & SS
Create Masks
Vegetation Mask (4−3)/(4+3)
Deciduous Coniferous Grass/Crops
Water Mask PI5 <T
Water Swampland
Cloud Mask (EOSAT)
Clouds Shadows
Other Mask
Urban Asphalt Bare Soil Other
APPLY MASKS
VEGETATION
WATER
CLOUDS
OTHER

Senator **Levin**. Our final witness is John C. Rennie who is on the Board of Directors of the United States Chamber of Commerce and is president of the Professional Services Council. Mr. Rennie, we want to welcome you. It has been a long wait for you, but I hope an interesting one.

Mr. **Rennie**. Yes, sir, it has, Mr. Chairman.

STATEMENT OF JOHN C. RENNIE, PRESIDENT, PACER SYSTEMS, INC., BILLERICA, MA

Mr. **Rennie**. Mr. Chairman, I would ask that my statement be entered in the record verbatim. I will sort of skim through it and add a couple of personal notes if I might.

Senator **Levin**. It will be made a part of the record in its entirety.

Mr. **Rennie**. My name is Jack Rennie, and I am president of Pacer Systems, Inc., a largely professional services company and supplies these services to the Government, several departments.

I am appearing here today on behalf of the U.S. Chamber of Commerce and the Professional Services Council, and I certainly appreciate the opportunity to testify before this Subcommittee regarding the critical issue of the appropriate role of Federally Funded Research and Development Centers, FFRDCs.

We are particularly concerned with the competitive position that these centers occupy as compared with private sector firms providing comparable professional services. I share the Subcommittee's concern about the potential for unfair competition from these quasi-governmental entities. This subject has been at the top of the public policy agenda of the Professional Services Council and has been discussed a number of times in the Small Business Council at the U.S. Chamber.

In addition, we have looked at the inequity of the manner in which FFRDCs compete with private business. Let me assure the Subcommittee that the case discussed earlier this morning, all morning really, is not an isolated example. It appears to be relatively typical of the kind of action often taken by Federal agencies to avoid complying with the spirit and intent of the law mandating competition.

Thousands of companies across the United States with capabilities comparable to those of FFRDCs are never given the opportunity to compete for Federal Government work. This is largely due to the special exemptions from competition provided the FFRDCs in existing law. It also appears that sponsoring agencies in some cases unreasonably enlarge the scope of the FFRDCs mission after the center has been established.

An example of this phenomenon in the Command, Control, Communications, and Intelligence, C3I Division of the Mitre Corp., this division was created to support the Electronics Systems Division of the Air Force, but Mitre recently received a multimillion dollar contract funneled through this Air Force FFRDC to provide system engineering support to the Federal Bureau of Investigation's National Crime Information Center.

I am hopeful that the Subcommittee will agree that private sector professional services companies with the appropriate capabilities should be given the opportunity to compete for Federal research and development work. The denial of such opportunity has serious implications for this Country's research and development capability, and the health of its defense, technological base as was mentioned earlier.

I would also like to discuss the issue of whether some FFRDCs are operating outside the scope of their original mission, and the effects that this might be having on private businesses.

Finally, I would like to offer some recommendations to the Subcommittee concerning legislative action that could remedy some of the inequities currently faced by the private businesses when competing with FFRDCs.

FFRDCs were established after World War II when the Federal Government determined that its research and development needs could not effectively be met by the private sector organizational entities. Much time has past since then and the high tech industries have developed very well.

Taken together, the Departments of Defense, Energy, Health and Human Services, and the National Science Foundation, and NASA, support 36 FFRDCs in 1985. These centers spent, as you mentioned, Mr. Chairman, about $5 billion in research and development funds awarded through noncompetitive funding agreements with their sponsoring agency, and they employed approximately 80,000 people during that same year, 1985.

There are admittedly some apparent advantages to be derived from the establishment and operation of FFRDCs. First, sponsoring agencies argue that because of their quasi-governmental nature the centers are more objective and independent in the conduct of their assignments than Government agencies or private sector companies.

Second, because FFRDCs are not constrained by civil service salary and promotion regulations, they are arguably able to attract and retain high quality staff members more easily than the Federal Government.

Third, because of the quasi-governmental nature of FFRDCs, the centers appear to have an intimate familiarity with the sponsor agencies activities and needs. FFRDCs are also supposed to respond quickly to the needs of the sponsoring agency.

There are, of course, substantial disadvantages to the use of FFRDCs, most of which are also attributable to their noncompetitive quasi-governmental nature.

First, FFRDCs are expensive to operate and have little incentive to control their costs. In fact, examination of the centers show that they are among the highest priced of high quality research organizations. Not only are the centers costly, but also they appear to be duplicating extensive existing capabilities in the private sector.

Second, FFRDCs have been criticized for having an inappropriate amount of influence over Federal policy. A recent example is DOD proposed Strategic Defense Initiative Institute. Critics have argued that an FFRDC so tightly tied to its sponsoring agency would find it difficult to maintain its independence in its recommendations and, therefore, would be compromised.

Third, another problem is the lack of accountability of a competitive environment for FFRDCs.

Fourth, the exceptional nature of FFRDCs appears to have negative effects on Federal in-house laboratories. The FFRDCs can pay more and, thus, hire the best talent available. Often the centers hire scientists working for the Federal laboratories.

Fifth, and finally, another issue is that FFRDCs seem to have an unfair advantage in obtaining Federal research and development work resulting from their long-term relationship with their sponsoring agency. Sponsoring agencies appear to be enlarging their FFRDCs' purpose, mission, and general scope of work in order to award them federal work that otherwise would have to be awarded on a competitive basis.

With regard to the Competition In Contracting Act, as you know, Mr. Chairman, CICA was intended to increase competition in Government contracting, and to impose more stringent restrictions on the award of noncompetitive, or sole source contracts.

CICA provides several limited exemptions from requirements for competition. One of these exemptions provides that if the agency had determined that it would be in the interest of national defense in establishing or maintaining an essential engineering, research, or development capability to be provided by an educational or other nonprofit institution, or a federally funded research ad development center, it may award a contract noncompetitively.

Thus, FFRDCs are potentially exempt from the competitive requirements of CICA. The exemptions of FFRDCs under certain circumstances from these competitive requirements permit sponsoring agencies to avoid the effort of seeking competition. Work may be sole sourced to FFRDCs and often is simply because it is easier than competition.

We recommend that the CICA be amended to eliminate the special exemption from competition for FFRDCs.

Now with respect to the Defense Authorization Act, Title 9, Section 912, this is the Defense Authorization Act for fiscal year 1987, that section limited the work placed by the Secretary of Defense with FFRDCs to work that is within the purpose, mission, and general scope of effort of the center as established in the sponsoring agreement.

New FFRDCs may not be created until the head of the sponsoring agency submits to the Congress a report describing the purpose, mission, and general scope of effort of the proposed center. Section 912 also directs the General Accounting Office to conduct a study and issue a report on the national defense role of FFRDCs.

These requirements, in our mind, are a step in the right direction. With this language Congress recognized a need to examine whether FFRDCs unduly are enlarging their specific scope of work. I have already mentioned the Mitre example.

In OFPP policy letter 84-1, that letter established Government-wide policies for agencies to follow in establishing, using, periodically reviewing and terminating the sponsorships of FFRDCs.

In the section entitled "Sponsoring Agreements," the letter states that, "There shall be in each sponsoring agreement a prohibition against the FFRDC competing with any non-FFRDC concern in response to a Federal agency formal request for proposal for other than the operation of an FFRDC."

This prohibition is not required to be applied to any parent organization or other subsidiary of the parent organization in its non-FFRDC operations.

If our earlier recommendation on CICA exemption is accepted, then this language should be amended, that is I think the language in the OFPP statement, to allow FFRDCs to compete with the private sector for Government-issued requests for proposals.

In short, FFRDCs should not be exempt from the requirements of competition under CICA, nor should they be prevented from openly competing with the private sector for work that they can provide competitively. By providing for an openly competitive market, Congress can help assure that the Government will receive the best possible research at competitive prices.

I would put my hat on parenthetically here as the Commissioner for Procurement in the White House Conference on Small Business 1986 and say: Should this combination of events I have mentioned be enacted, then I would add that the proper provisions in any such competition should be made so that we actually have a fair competition. This whole issue of competition with non-profits, of course, was of great concern in the White House Conference.

Also I might add in such a competition, the FFRDCs should not be involved in the evaluation of the proposals.

In closing, I reiterate how critically important we believe it is to balance the national need for FFRDCs with the need to obtain the benefits of full and open competition in Government contracting.

The United States economy today is led by professional research and services companies performing in a highly competitive market. These companies should not be denied the opportunity to compete for work the Federal Government requires. The Federal Government should not be denied the opportunity to obtain this work in a competitive manner and at a lower overall cost.

The Congress will be acting in the interest of the Federal Government as well as the economic health of the United States in making the changes we have recommended here this morning.

I might add a personal note after listening to the testimony this morning, Mr. Chairman. In a number of other venues I have discussed procurement and the procurement process in a more general way. One of the things I keep coming back to—I guess I have to take this opportunity to mention it again—is I feel that probably there is no single problem in the whole procurement system right now more important than the disconnect—the word you have used and I have used it, too—between the contracting chain—that is the movement of contract paperwork—and the people in the Government that have program responsibilities that have to get things done on schedule. They have reviews and calendar dates, and so forth.

This disconnect that has occurred where it takes typically at least 8 months to run a competition in the Government, and this has been somewhat added to by the CICA since there is a push to make more things competitive, this disconnect is to me one of the underlying, you might say, diseases of the system. It surfaces in a number of ways.

One of the ways it surfaces is that people, well meaning people in the Government that have responsibilities to get work done, at times have to find ways to get the work done without competing it because they simply cannot do it with the schedules they have.

So, I think, as we look at the whole procurement system we would see many instances of program managers and people of that type taking opportunities, legal opportunities in most of my experience, to simply get around the intent of the maximized competition idea simply because they can't live with it the way the paperwork is.

We see this in trends toward larger, multi-year contracts with very broad scopes to them so that they can be easily amended. We see things like we evidenced this morning where you come up near as you begin to approach the end of a fiscal year, people see that their program monies may be running out, and they do what they have to to get the job done. Many times this injures people in the process. Unfortunately, too often it is the small businesses that get nailed.

I should add it is not only the small business. I myself have been in competitions where the competition was called off. We also had spent considerable monies. There were four or five teams that were competing on a job and the job was simply called off because the Government decided afterwards that they hadn't properly scoped the work.

The only redress that you have in a case like that, if you are willing to do it and pursue it, is perhaps try to recover the cost of the proposal. Many times that is not taken; first, because the people may not have the money to pay you; second, if it is a potential customer, you may irritate them and cause yourself some more problems.

So this kind of thing that happened in this instance with Dr. Vincent's firm to me is yet again another symptom of what I choose to feel is not, mean people trying to do the wrong thing, but simply people who are trying to get the job done the best way they can and are really hampered by this contracting complexity.

I know there are some moves being made now to try to simplify this process, and certainly the U.S. Chamber and Professional Services Council, and in my own behalf, we would be happy to work with anyone that is attacking that problem. Thank you, Mr. Chairman.

[The prepared statement of Mr. Rennie follows:]

STATEMENT
on
FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS
before the
SUBCOMMITTEE ON INNOVATION, TECHNOLOGY, AND PRODUCTIVITY
of the
SENATE COMMITTEE ON SMALL BUSINESS
for the
U.S. CHAMBER OF COMMERCE
and the
PROFESSIONAL SERVICES COUNCIL
by
Jack Rennie

April 7, 1987

My name is Jack Rennie and I am President of Pacer Systems Inc. I am appearing here today on behalf of the U.S. Chamber of Commerce and the Professional Services Council. I appreciate the opportunity to testify before this Subcommittee regarding the critical issue of the appropriate role of federally funded research and development centers (FFRDCs). We are particularly concerned with the competitive position that these centers occupy as compared with private-sector firms providing comparable professional services.

I share the Subcommittee's concern about the potential for unfair competition from these quasi-governmental entities; this subject has been at the top of the public policy agenda of the Professional Services Council for some time. In addition, the Chamber has recognized the inherent inequity of the manner in which FFRDCs compete with private businesses.

Let me assure the Subcommittee that the case discussed earlier this morning is not an isolated example. It appears to be relatively typical of the kind of action often taken by federal agencies to avoid complying with the spirit and intent of the law mandating competition. Thousands of companies across the United States with capabilities comparable to those of FFRDCs are never given the opportunity to compete for federal government work. This is largely due to the special exemptions from competition provided FFRDCs under existing law.

It also appears that sponsoring agencies, in some cases, unreasonably enlarge the scope of an FFRDC's mission after the center has been established. An example of this phenomenon is the C3I Division of the Mitre Corporation. This division was created to support the Electronic Systems Division of the Air Force, but Mitre recently received a multi-million dollar contract, funneled through this Air Force FFRDC, to provide system engineering support to the Federal Bureau of Investigation's National Crime Information Center.

This morning I would like to discuss the background of FFRDCs and the rationale for their use. I also would like to describe the exemptions from competition that FFRDCs are provided under the Competition in Contracting Act (CICA). I believe that this discussion will lead to the conclusion that a delicate balance must be achieved between the legitimate need for FFRDCs as presently conceived and the need to adhere to the intent and spirit of the law with regard to competition in government contracting.

I am hopeful that the Subcommittee will agree that private-sector professional services companies with the appropriate capabilities should be given the opportunity to compete for federal research and development work. The denial of such an opportunity has serious implications for this country's research and development capability and the health of its defense technological base.

I also would like to discuss the issue of whether some FFRDCs are operating outside the scope of their original mission and the effects that this might be having on private businesses. The Congress already has expressed concern about this problem. A special section on FFRDCs was inserted into last year's Defense Authorization Act that dealt with the establishment of and scope of work for FFRDCs. I would like to remind the Subcommittee about the intent behind this legislation and to suggest that this might be just the first step in a Congressional effort to provide more rigorous oversight in this area.

Finally, I would like to offer some recommendations to the Subcommittee concerning legislative action that could remedy some of the inequities currently faced by private businesses when competing with FFRDCs.

BACKGROUND ON FFRDCs

FFRDCs were established after World War II, when the federal government determined that its research and development needs could not effectively be met by private-sector organizational entities. The centers were created as research and development institutions exclusively or substantially financed by agencies of the government, known as sponsoring agencies. FFRDCs since have operated as private companies subject to certain congressional or sponsoring agency controls.

Most FFRDCs were established between 1942 and 1963; by 1963 the Department of Defense (DOD) had established 39 FFRDCs. Congressional pressure to reduce the number of FFRDCs, as DOD in-house capability increased, resulted in the fact that by 1976 the Pentagon supported only six centers. Today, it supports nine; three were established between 1984 and 1985 after the enactment of CICA. These new centers are the Software Engineering Institute at Carnegie Mellon University; the Logistics Management Institute in Bethesda, Maryland; and the RAND OSD/Office of the Joint Chiefs of Staff in Santa Monica, California.

Taken together, the Departments of Defense, Energy, and Health and Human Services, the National Science Foundation and National Aeronautics and Space Administration supported 36 FFRDCs in 1985. These centers spent $5 billion in research and development funds awarded through noncompetitive funding agreements with their sponsoring agency, and they employed approximately 80,000 people during 1985.

ADVANTAGES AND DISADVANTAGES OF FFRDCs

There are, admittedly, some advantages to be derived from the establishment and operation of FFRDCs.

First, sponsoring agencies argue that because of their quasi-governmental nature, the centers are more objective and independent in the conduct of their assignments than government agencies or private-sector companies. Private-sector companies in particular are perceived by the sponsoring agency as subject to conflicts of interest. For example, it has been suggested that if a small services firm is the subsidiary of a large, hardware-producing company, its recommendations might favor the use of products produced by its parent company.

Second, because FFRDCs are not constrained by Civil Service salary and promotion regulations, they are arguably able to attract and retain high-quality staff members more easily than the federal government. This advantage addresses the difficulties faced by federal laboratories in attracting, retaining, and motivating scientists and engineers.

Third, again because of the quasi-governmental nature of FFRDCs, the centers appear to have an intimate familiarity with the sponsoring agency's activities and needs. Indeed, they perform research and development upon the direct request of the federal government and receive at least 70% of their funding from their sponsoring agency.

FFRDCs are also supposed to respond quickly to the needs of the sponsoring agency.

There are, of course, substantial disadvantages to the use of FFRDCs, most of which are also attributable to their noncompetitive, quasi-governmental nature.

First, FFRDCs are expensive to operate and have little incentive to control their costs. In fact, examination of the centers shows that they are among the highest priced of high-quality research organizations. Not only are the centers costly, but also they appear to be duplicating extensive existing capability in the private sector. Existing private-sector capabilities can be provided on a competitive basis, often at a lower overall cost to the government.

Second, FFRDCs have been criticized for having an inappropriate amount of influence over federal policy. A recent example is the DOD-proposed SDI Institute. Critics have argued that an FFRDC so tightly tied to its sponsoring agency would find it difficult to maintain its independence, and its recommendations, therefore, would be compromised. The possibility of the FFRDC making critical policy recommendations to the Pentagon, while being unduly influenced by its sponsoring agency, is obviously undesirable.

Third, another problem is the lack of accountability and of a competitive environment for the FFRDCs. In 1983, the White House Science Council's Federal Laboratory Review Panel determined lack of accountability to be one of the FFRDCs' most serious deficiences. A report by the Panel noted that "in the absence of economic and competitive forces, the Federal Laboratories must be held accountable by their agencies. Unfortunately, in most cases, the agencies' oversight means an excessive amount of reporting and paperwork, but inadequate scrutiny of the quality and relevance of the laboratories' activities."

Fourth, the exceptional nature of FFRDCs appears to have negative effects on federal in-house laboratories. The FFRDCs can pay more and, thus, hire the best talent available. Often, the centers hire scientists working for the federal laboratories. The FFRDC work often is perceived as more scientifically challenging which, in turn, has a demoralizing effect on federal laboratory personnel.

Fifth, another issue is that FFRDCs seem to have an unfair advantage in obtaining federal research and development work resulting from their long-term relationship with the sponsoring agency. Sponsoring agencies appear to be enlarging their FFRDCs' purpose, mission, and general scope of work in order to award them federal work that otherwise would have to be awarded on a competitive basis.

CICA

As you know, CICA was intended to increase competition in government contracting and to impose more stringent restrictions on the award of noncompetitive or sole-source contracts. CICA builds on the two primary procurement statutes, the Armed Services Procurement Act and the Federal Property and Administrative Services Act, to establish a uniform framework that distinguishes between competitive and noncompetitive procedures.

CICA provides several limited exemptions from requirements for competition. These include when the property or services are available from only one responsible source; when there is an unusual or compelling urgency; when necessary for industrial mobilization; when a statute authorizes or requires a procurement through an agency or specified source; when necessary to comply with international agreement or treaty terms; when in the interests of national security; and when otherwise in the public interest.

A final exemption provides that if the agency head determines that "it would be in the interest of national defense in establishing or maintaining an essential engineering, research, or development capability to be provided by an educational or other nonprofit institution or a federally funded research and development center," it may award a contract noncompetitively. Thus, FFRDCs are potentially exempt from the competitive requirements of CICA. When CICA was drafted, Congress determined that requiring FFRDCs to compete for all work might compromise the centers' ability to maintain the critical mass of researchers and experts necessary to meet the needs of a sponsoring agency.

An analysis of CICA and the accompanying conference report reveals that Congress believed that the procurement process benefits substantially from competition and that competition should be open to all capable contractors. Bill language requiring "full and open" competition ensured that access.

The exemption of FFRDCs under certain circumstances from the competitive requirements of CICA permits sponsoring agencies to avoid the effort of seeking competition. Work may be sole-sourced to FFRDCs, and often is, simply because it is easier than competition. We are aware of numerous instances in which work placed with FFRDCs was work that could have been performed by the private sector.

We recommend that CICA be amended to eliminate the special exemption from competition for FFRDCs.

DEFENSE AUTHORIZATION ACT, TITLE IX, SECTION 912

Congress included Section 912 of Title IX into the Defense Authorization Act for Fiscal Year 1987. That section limited the work placed by the Secretary of Defense with FFRDCs to work that is within the purpose, mission, and general scope of effort of the center as established in the sponsoring agreement. New FFRDCs may not be created until the head of the sponsoring agency submits to the Congress a report describing the purpose, mission and general scope of effort of the proposed center.

Section 912 also directs the General Acccunting Office (GAO) to conduct a study and issue a report on the national defense role of FFRDCs. This study is to consider five points: the effectiveness of procedures ensuring that the centers are established on the basis of Office of Federal Procurement Policy (OFPP) criteria; the effectiveness of procedures ensuring that the work performed is within the appropriate purpose, mission, and general scope of effort; the growth of such centers over the past four years; the effect of exemptions from competition requirements; and the relationship of FFRDCs to their sponsors.

These requirements are a step in the right direction. With this language, Congress recognized a need to examine whether

FFRDCs unduly are enlarging their specific scope of work. I already have mentioned the Mitre example. Many FFRDCs also create subsidiaries and/or special divisions to expand the scope of work that they can perform. These divisions and subsidiaries, therefore, are unconstrained in their growth and are often in unofficial competition with the private sector. The tendency for FFRDCs to increase in size and stray from the intent of their original mission was documented recently by the White House Science Council's Federal Laboratory Review Panel in 1983. We believe that the GAO study will yield similar conclusions.

OFPP POLICY LETTER 84-1

The OFPP issued OFPP Policy Letter 84-1 in order to establish government-wide policies for agencies to follow in establishing, using, periodically reviewing, and terminiating the sponsorship of FFRDCs. In the section entitled "Sponsoring Agreements," the letter states that there shall be in each sponsoring agreement:

> [A] prohibition against the FFRDC competing with any non-FFRDC concern in response to a Federal agency formal Request for Proposal for other than the operation of an FFRDC. This prohibition is not required to be applied to any parent organization or other subsidiary of the parent organization in its non-FFRDC operations. However, sponsoring agencies may expand this prohibition as they determine necessary and appropriate.

As a result, FFRDCs are not allowed to enter into formal competition with the private sector in response to government Requests for Proposals. If our earlier recommendation on the CICA exemption is accepted, then this language should be amended to allow FFRDCs to compete with the private sector for government-issued Requests for Proposals. FFRDCs should not be exempt from the requirements of competition under CICA, nor should they be prevented from openly competing with the private sector for work that they can provide competitively. By providing for an openly competitive market, Congress can help assure that the government will receive the best possible research at competitive prices.

CONCLUSION

In closing, I reiterate how critically important we believe it is to balance the national need for FFRDCs with the need to obtain the benefits of full and open competition in government contracting. I have described the negative consequences that result from exempting FFRDCs from the competitive requirements of CICA. I recommend amending CICA by removing the FFRDC exemption as one method to achieve some balance.

I also recommend that Congress continue to exercise its oversight in this important area. When the results of the GAO study commssioned under Section 912 are known, Congress might find it beneficial to take further action.

The United States' economy today is led by professional research and services companies performing in a highly competitive market. These companies should not be denied the opportunity to compete for work the federal government requires. The federal government should not be denied the opportunity to obtain this work in a competitive manner and at a lower overall cost. The Congress will be acting in the interests of the federal government as well as the economic health of the United States in making the changes we have recommended here this morning.

Senator **Levin**. Mr. Rennie, thank you for appearing on behalf of the Chamber and on behalf of the Professional Services Council. I gather you are here in both capacities this morning?

Mr. **Rennie**. Yes, sir.

Senator **Levin**. Your testimony is extremely relevant and extremely helpful. What you are doing is laying out the more general problem, which is critical. We understand the GeoSpectra incident is not an isolated problem. Similar problems have happened. I gather you've had a number of examples brought to your attention where work has been diverted from private business to FFRDCs, is that correct?

Mr. **Rennie**. Yes. We have some examples that we have compiled in short order, and we could add to that for the record and also for the use of the Subcommittee.

I should say that many times the problem is that the work never actually surfaces. For example, up near us is Mitre, one of the big FFRDCs, and ESD, The Air Force organization they basically support. Essentially at the beginning of each year the Air Force sits down with principals from Mitre and they decide on what kind of a capability they want to have during the year.

In other words, they will say we are going to fund you for, let's say, $300 million, or some number of that order, and the Air Force expects for that money to have a capability there resident in Mitre.

At that stage they don't always know all the work that is going to be done. In fact, once the contract is signed, you see, the incumbency now falls on the Air Force to use Mitre. Therefore if a job comes up—There was an instance in my own company in the late 1970s where on the AWACS program there was a proposed change to the AWACS system which would improve what was called at that time its maritime capability. Basically it was its ability to track ships' movement on the ocean, and so forth.

This is an area that our company knew a great deal about having worked for many years in systems work in the anti-submarine warfare, ocean surveillance area, and we were well aware of capabilities that existed in Navy aircraft that were really quite further ahead than what I think the AWACS system was intending to do.

We went and talked with the AWACS program manager about this to see if we could help. We happened to find out about it just through secondary contacts with people over at the Air Force base, and we went and talked to the program manager about it. The difficulty was they had tasked Mitre because essentially they had that capability there.

So the program manager, or assistant program manager was saying well, we have the people there in Mitre. They didn't know anything about maritime work. They were all basically Air Force people, but they were saying, "I have them there. I am paying for their capability, so I am going to use them."

Although they might have entertained an unsolicited proposal and have to justify sole-source and all that, or even put it out on the street to help them in the systems aspect of improving the AWACS system, they went from what was their viewpoint of a very reasonable way, which is we are paying Mitre $300 million, whatever the number was that year, to keep this capability around so we ought to use them.

So the work never really gets out on the street in many cases. What that does is it stifles initiative such as we see in the SBIR program where you pose a problem to the competitive world and let them come in with good solutions. It surprises people how many interesting and innovative solutions come up. This is what we are losing in many instances in this kind of work in my view.

Senator LEVIN. We would welcome two things for the record. One is a list of the other examples you've made reference to, where work was diverted from private business to an FFRDC.

Second would be a list of what you just talked about where the description of the FFRDC's mission is so general that there is that temptation to slide work under the big broad description and where the work never gets out to private enterprise.

If you could identify where an FFRDC's work description is so general that there is that temptation, and the innovation which would be produced by putting the work out on the street is lost to us without anyone really knowing about it—whatever you can do in that area would also be welcome.

You have indicated that you think that CICA ought to be amended to eliminate the exemption from competition for FFRDCs. I am wondering short of that, if you would support an amendment to CICA where if one agency wants another agency's FFRDC to do work, there would then be no exemption from competition. It is a much narrower change in CICA, but assuming we can't accomplish the much broader change, we may be able to do the narrower change.

Mr. RENNIE. That would put some work out onto the street.

Senator LEVIN. There were two cracks that this contract fell into. There was one crack inside of the Army where one part of the Army didn't know what the other part of the Army knew. Then you had the crack between the Army and the DOE in this case. It is that second one which maybe we could avoid a little bit if we could tighten the rules for the shift of money from one agency to another agency's FFRDC. I would think the potential for abuse would be worse there.

Mr. RENNIE. The great MIPR movement is alive and well. There is no doubt about it. It is amazing to what extent agencies will avoid having to go through the contracting chain. Even in the private sector we proposed work to the Navy on some instrumentation for helicopters that we were qualified to do because of some special work we were doing under contract to the Coast Guard. Rather than contracting, the Navy MIPRed money over the Coast Guard who then pushed money to Aerospacial in Texas, who in turn pushed money to Collins in Cedar Rapids who were our contractor. Our $35,000 proposal jumped to $100,000 by the time I got through this chain.

They would rather pay the $100,000 and avoid the contracting chain. That tells you a lot. These aren't people trying to do underhanded things. They were simply interested in this research and wanted to get it done quickly.

It is a crazy situation. Yes, sir, any kind of a move like that would have my support.

Senator **Levin**. I am afraid the slogan around here more and more is "do one for the MIPR." [Laughter.]

Your point, by the way, is an extremely important one. What we are dealing with here is people who have a job to get done. They are frequently caught up in a process. That process is unfair in many instances to business, as it was obviously in this case. It is not the people who intend to be unfair, it is the process which is in place which is unfair.

It is abusive to people who have acted in good faith to suddenly have the rug pulled out from under them without any explanation whatsoever. We are not judging here the people whose goal it is to get that mapping done. That was their goal. It is an appropriate goal. It is one that national defense needed. There is no suggestion it was a wasteful project, even though we spent a lot more money on it than we would have if we had not MIPRed it and had, instead, gotten it out on the street and kept it on the street where it should have been kept.

I think your point is important.

Mr. **Rennie**. I think you are particularly vulnerable in industry if you have not dealt with the Government much before. Those of us who have dealt with the Government are a little wiser to the ways of how things go on. We are either forewarned a little bit more ourselves, or we may be on the receiving end of some of these crazy procurement practices.

It is especially so for someone who is just trying to break into Government and offer the best the country has to offer to Government. They are the ones who are most vulnerable to this internal conflict which they really have very little insight to at all.

Senator **Levin**. The stories get out as to what happens to small business, and then other small businesses say they would rather not get involved. That means we are losing their creativity. It is the new companies that get in, that get ground up without expectation. We also ought to worry about the companies who hear about it and say, "Not for me—it is too complicated, the risk is too great, and the frustration is too great."

We have to do what we can to simplify the process to stimulate sensitivity to what we are dealing with. We are talking about national security because we want these firms to compete. We want the best that we've got and our security may some day depend upon whether or not one firm decides to get involved. You never know what nail it is, that loses the horseshoe, that loses the horse. You just don't know, if the crunch ever comes, what firm it was that never bid on a project because they were discouraged by the frustrating process that we impose on people—that could cost us dearly at some point.

We are really talking here about money, about national security, about fairness and decency. All of those are involved.

Your testimony is very helpful. We appreciate your being here and your continuing activity in this area. We would appreciate that information for the record that we asked you to provide.

Mr. **Rennie**. Yes, sir. We will supply it.

[Material follows:]

PROFESSIONAL
SERVICES
COUNCIL

Representing companies
that are creating the
future through innovation,
technology and ideas

John C. Rennie
President

Virginia Littlejohn
Executive Director

June 1, 1987

The Honorable Carl Levin
Chairman, Subcommittee on
Innovation, Technology and Productivity
Senate Small Business Committee
Washington, D.C. 20510

Dear Senator Levin:

Thank you for providing the opportunity for me to testify at your Small Business Subcommittee hearing on FFRDCs on behalf of the Professional Services Council (PSC) and the U.S. Chamber of Commerce.

Enclosed please find information which I agreed to provide at the April 7 hearing, including a list of FFRDCs that perform work which private sector professional and technical services firms could provide to the government, often at a lower cost, as Mr. Vincent of Geospectra confirmed in his testimony. Some of these FFRDCs have broadly defined mission statements that permit them to do the work; however many expand beyond their original charters to perform contract work where capability is readily available from the private sector. Agencies often award contracts on a sole-source basis to these FFRDCs for work that could instead be competed among private sector firms in our industry, because it is easier than complying with the arduous process of competition.

To date, we have not been able to collect more than two substantive documented examples of work that was improperly diverted from a small business to an FFRDC. We have included some additional generic examples which involve work that was awarded on a sole-source basis to an FFRDC, without the benefit of any competition; therefore, it cannot be verified whether or not the contract would have been awarded to a small business. However, we are still receiving information from PSC member firms, small and large, and will relate any additional information to your committee staff.

It has been a pleasure to work with you and your highly competent staff on matters of such great importance to the professional services industry.

Sincerely,

John C. Rennie

John C. Rennie
President

Enclosures

JR/cav

World Center, 918 16th Street, N.W., Suite 406, Washington, D.C. 20006, Phone: 202/296-2030, Fax: 202/296-2035

LIST OF FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS WHICH PERFORM WORK THAT COULD BE PROVIDED BY PROFESSIONAL AND TECHNICAL SERVICES FIRMS

Aerospace Corporation, El Segundo, CA

Applied Physics Laboratory (Johns Hopkins University), Baltimore, MD

Center for Naval Analysis, Arlington, VA

Institute for Defense Analysis, Arlington, VA

Jet Propulsion Laboratory, Pasadena, CA

Lawrence Livermore National Laboratory, Livermore, CA

Lincoln Laboratory, Lexington, MA

Logistics Management Institute, Bethesda, MD

Los Alamos National Laboratory, Los Alamos, NM

Mitre Corporation, Bedford, MA

Rand Corporation, Santa Monica, CA

Sandia National Laboratories, Albuquerque, NM

Solar Energy Research Institute, Golden, CO

SPECIFIC EXAMPLES OF AGENCIES' USE OF AN FFRDC IN ORDER TO FOREGO THE COMPETITIVE BID PROCESS:

(1) DEPARMENT OF DEFENSE (AIR FORCE)

When the Air Force decided to modify the AWACS Aircraft to give it maritime capabilities, Pacer Systems heard about it unofficially. Pacer met with officials at Hanscom Air Force Base in Bedford, MA to discuss the modifications because they had the capability required to perform the initial systems analysis and engineering work. Pacer had previously done similar, but more advanced work within the Navy. Pacer was told that even though they had an extensive background (more than the contract required), while Mitre, at that time, did not even have the capability, the Air Force was under contract with Mitre and would be giving them the additional modification work as well. The modification required an enhancement to the AWACS system and would have cost approximately $200 million. Thus, the initial engineering and analysis work presented an excellent opportunity for industry to participate.

(At the beginning of each year, the Air Force negotiates a figure with the Mitre Corporation for work that Mitre will perform during the year so that Mitre will keep the capability on staff to do that much work. It is then up to the Air Force to use them for that amount of specified work.)

(2) DEPARTMENT OF DEFENSE (NAVY)

In response to a request for proposals (RFP), a PSC member company submitted technical and cost proposals to the Space and Naval and Warfare Systems Command in July, 1985 to perform an "Assessment of Maritime-Based Anti-Submarine Launched Ballistic Missile (SLBM) System Architecture Concepts." On October 7, 1985, an announcement appeared in the Commerce Business Daily (CBD) stating that one-third of this proposed procurement was to be a small business set-aside (size standard 500 employees, responses due November 25, 1985). On December 31, 1985, the Space and Naval Warfare Systems Command, upon direction from the Assistant Secretary of the Navy (Research, Engineering and Systems), cancelled the RFP. The work was subsequently awarded to a Federally Funded Research and Development Center (FFRDC), the Center for Naval Analysis (CNA). Two years later, CNA is still working on this assignment.

Over 400 hours of professional staff time were expended in preparing the technical proposal. This does not include publication work, preparation of the cost proposal or the efforts of the two subcontractors on this bid. This represents a significant investment of time and effort that could have been productively applied elsewhere. The procurement was never given the benefit of full and open competition, the proposals submitted were never evaluated, and the companies involved were never given the opportunity to compete as originally indicated.

(3) DEPARTMENT OF ENERGY

The Solar Energy Research Institute (SERI) contracted, without competition, with the National Aeronautics and Space Administration's (NASA) captive FFRDC, Jet Propulsion Laboratory (JPL), to perform a study to design a solar test facility for SERI. JPL's mission is space, not solar energy. The individual assigned by the JPL to do the study was an astronomer with no previous experience or knowledge in the design of central receiver configured solar facilities. This was done even though SERI and JPL both knew that at least one private sector for-profit firm was interested in the work and appeared to have the capability to perform it.

(4) DEPARTMENT OF JUSTICE, FEDERAL BUREAU OF INVESTIGATION (FBI)

In November, 1985, the FBI awarded a sole source contract to the Mitre Corporation FFRDC to perform system engineering support for the National Crime Information Center following the formally stated and written objections of the Professional Services Council and its members. A letter of objection was written to William H. Webster, Director of the FBI, on November 5, 1985 and a follow-up meeting was held with William M. Chapin, Chief, Contract Review Unit, Property Procurement and Management Section of FBI's Administrative Services Division. At that time and in a subsequent letter dated December 4, 1985, PSC was advised that the FBI intended to move foward with their sole-source procurement to the Mitre Corporation without considering available private sector capabilities.

(5) DEPARTMENT OF HEALTH AND HUMAN SERVICES

In the November 7, 1985 edition of the Commerce Business Daily (CBD), the Department of Health and Human Services announced a sole-source contract to be awarded to the Mitre Corporation to provide technical and toxicological support services to the FDA by gathering screening validation and reporting on toxicology data -- work that is routinely perfomed by taxpaying private sector firms whose services could be acquired on a competitive basis. The CBD synopsis implied that the Mitre Corporation is the only source which has the acknowledged expertise to conduct the required effort, which is simply not true. There is also nothing unique about the institutional characteristics of Mitre to perfom this type of work, especially given the protection against conflict of interest which can be exercised by the government in a competitive procurement situation.

Senator **Levin**. Thank you so much, Mr. Rennie. The hearing will now stand adjourned.

[Whereupon, at 11:37 a.m., the hearing was adjourned.]

APPENDIX

CASE HISTORY OF GOVERNMENT WORK DIVERTED FROM SMALL BUSINESS TO FFRDC

Effort by Small Business to Obtain Army Work

May 1985: President of GeoSpectra visits Army

July 1985: Army visits GeoSpectra's operations

Aug. 1985: GeoSpectra submits unsolicited proposal

April 1986: Army obtains funds for RFP based on unsolicited proposal

July 1986: GeoSpectra receives RFP

Aug. 1986: GeoSpectra submits response to RFP

Sept. 4, 1986: GeoSpectra undergoes pre-award audit; the same day, Army decides award cannot be issued by the end of the fiscal year

Sept. 8, 1986: Army cancels RFP

TOTAL ELAPSED TIME--16 MONTHS

Effort by Army to Assign the Work to an FFRDC

Sept. 5, 1986: Army makes initial contact with FFRDC, by phone

Sept. 9, 1986: Army prepares 1-page Military Interdepartmental Purchase Request (MIPR) to transfer $300,000 to DOE for its FFRDC to do the work

Sept. 10, 1986: Army visits FFRDC, describes project

Sept. 16, 1986: DOE Headquarters accepts Army MIPR

Sept. 24, 1986: DOE Field Office accepts Army MIPR

Sept. 26, 1986: DOE notifies Army the FFRDC can do the work

TOTAL ELAPSED TIME--3 WEEKS

EXCERPT FROM THE ECONOMY ACT

§ 1535. **Agency agreements**

(a) The head of an agency or major organizational unit within an agency may place an order with a major organizational unit within the same agency or another agency for goods or services if—

(1) amounts are available;

(2) the head of the ordering agency or unit decides the order is in the best interest of the United States Government;

(3) the agency or unit to fill the order is able to provide or get by contract the ordered goods or services; and

(4) the head of the agency decides ordered goods or services cannot be provided by contract as conveniently or cheaply by a commercial enterprise.

PROJECT ORDER ACT

§ 23. Orders or contracts for material placed with Government-owned establishments deemed obligations

All orders or contracts for work or material or for the manufacture of material pertaining to approved projects heretofore or hereafter placed with Government-owned establishments shall be considered as obligations in the same manner as provided for similar orders or contracts placed with commercial manufacturers or private contractors, and the appropriations shall remain available for the payment of the obligations so created as in the case of contracts or orders with commercial manufacturers or private contractors. June 5, 1920, c. 240, 41 Stat. 975; July 1, 1922, c. 259, 42 Stat. 812; June 2, 1937, c. 293, 50 Stat. 245.

Change 1 has been incorporated.

DATE May 4, 1971#

ASD(C)

Department of Defense Instruction

SUBJECT Regulations Governing the Use of Project Orders

Refs.: (a) DoD Directive 7220.1, subject as above, February 16, 1970 (cancelled by DoD Transmittal 71-10, May 4, 1971)
* (b) DoD 7220.9-H, "Accounting, Guidance Handbook," authorized by
* DoD Instruction 7220.9, July 12, 1971
(c) DoD Directive 7410.4, "Regulations Governing Industrial Fund
* Operations," September 25, 1972
(d) DoD Directive 7200.4, "Full Funding of DoD Procurement Programs," October 30, 1969
(e) 41 U.S.C. 23; Title IV of the National Security Act of 1947, as amended; 10 U.S.C. 2202

I. PURPOSE

This Instruction prescribes regulations governing the use of project orders in the Department of Defense pursuant to authority contained in reference (e).

II. APPLICABILITY AND SCOPE

The provisions of this Instruction apply to the Military Departments and Defense Agencies, worldwide.

III. DEFINITIONS

A. A "project order" is a specific, definite and certain order issued under the authority contained in 41 U.S.C. 23 for the manufacture of materials, supplies and equipment, or for other work or services which, when placed with and accepted by a separately managed and financed Government-owned and operated establishment, serves to obligate appropriations in the same manner as orders or contracts placed with commercial enterprises. Any order (as distinguished from an allotment) which is the subject of any of the purposes set forth in subsection IV.A. and B., of this Instruction, and which is placed with a Government-owned and operated establishment (as defined in subsection C., below) by a component of a Military Department or Defense Agency shall be deemed to be a "project order" and shall be subject to the provisions of this Instruction, regardless of the form in which it is

#First amendment (Ch 1, 12/4/72)

(3) Any condition or limitation applicable to the procurement funds of any executive department, independent establishment, bureau, or office which places an order or lets a contract under the provisions of the Economy Act shall be applied in placing such order or letting such contract.

b. Project Order Agreements.

(1) Agreements entered into under the provisions of the Project Order Law (41 U.S.C. 23) are designed for use in ordering work and materials that are to be provided by a Government-owned and Government-operated (GOGO) establishment.

(2) Agreements must be specific, definite, and certain as to the work or materials they call for.

(3) Agreements issued under the provisions of this law shall not be used for ordering work and services that are general in nature and which cannot meet the criteria stated in b(1) and b(2) above.

(4) Agreements which meet the above project order criteria are considered as obligations in the same manner as provided for contracts placed with commercial manufacturers or private contractors. Annual funds obligated under the provisions of 41 U.S.C. 23 remain available until the completion of work.

(5) Obligations will be recorded on the basis of a signed acceptance copy from the performing activity.

(6) Project orders will not be accepted when the requesting agency is merely using this mechanism to extend the life of an expiring appropriation.

(7) Work must start in a reasonable time following the issuance of the order.

c. AEC Act. Reimbursable work may be performed pursuant to sections 31, 32, and 161 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2051, 2053, and 2201) only upon a determination that private facilities or laboratories are inadequate to the purpose. Reimbursable work performed at the Department's GOCO facilities is subject to DOE 4300.2.

d. Intergovernmental Cooperation Act of 1968. If this act is relied upon as the authority for performing reimbursable work, a determination must be made that the requested work or services cannot be procured reasonably and conveniently through normal business channels.

Planning Process. The cognizant Departmental officers will present the approved Institutional Plans to the Under Secretary annually at a meeting of the Field and Laboratory Coordination Council.

c. Work is appropriate for assignment at the multiprogram laboratories (vis-a-vis university or industry sectors) when it requires use of skills or facilities uniquely available at the laboratories, or is determined not to be within the capability and interest of university or industry to perform, or requires a fast startup or multidisciplinary approach not readily available to the private sector to meet an urgent national research and development need.

d. The laboratories may be assigned lead missions for day-to-day project management or program implementation of important areas of work. Lead mission assignments are initiated and established normally within the Institutional Planning Process. Such assignments are made by outlay program Departmental officers with the concurrence of the assignee laboratory, the appropriate operations office, and the cognizant Departmental officer.

e. The annual replanning process will consist of a call from the Under Secretary; issuance of general schedule and format by the Director of Energy Research; initial guidance and a call to laboratories for preliminary data by cognizant Departmental officers; outlay program Departmental officers' review of preliminary data; onsite review at the laboratories by cognizant Departmental officers; specific guidance and a call for a draft plan by cognizant Departmental officers; outlay Program Departmental officers' review of the draft plans and recommendations to cognizant Departmental officers; approval of plans by cognizant Departmental officers; and, presentation of approved plans to the Under Secretary. Operations offices shall monitor assignment of work to the laboratories throughout the year, and conduct the new work approval procedures, as necessary.

6. RESPONSIBILITIES AND AUTHORITIES.

a. The Under Secretary establishes Departmental policy and overall guidance for utilization of the multiprogram laboratories. In so doing, the Under Secretary uses the Field and Laboratory Coordination Council as an advisory body and as a forum to consider problems raised by any Departmental officer associated with the process. The Under Secretary will resolve any issues raised by outlay program Departmental officers with regard to access to any of the laboratories and will establish Departmental priorities on their use.

U.S. Department of Energy Regulation on Research and Development Work Performed For Others By Government-Owned, Contractor-Operated Facilities

or modifies contracts). This person is usually an operations office manager or his or her designee.

6. POLICY. It is DOE policy that:

   a. Facilities and the operating contractor personnel at DOE's GOCO installations may be used to perform research and development work for others when consistent with authorities or purposes granted DOE by authorizing legislation and other Federal statutes, laws and regulations. In general, such work can only be undertaken if it is determined, on an individual project basis, that:

      (1) The capability to perform the work in domestic private facilities and laboratories is not available on an independent, convenient and timely basis and at a reasonable charge;

      (2) The work will not commit DOE facilities and personnel to the detriment of DOE's program activities; and

      (3) Work must be for purposes authorized by law for the Department.

   b. R&D work for others is always performed under a contractual agreement between DOE and the sponsor and in accordance with DOE procurement and financial regulations.

   c. The overall level of effort devoted to research and development work for others at an installation will be limited, as necessary, to assure that the DOE facilities and personnel required for efficient and effective execution of DOE's mission programs are available.

7. OBJECTIVES. The objectives are to:

   a. Provide a means of assisting other Federal agencies and State and local governments in accomplishing their goals that may otherwise be unattainable, while avoiding unnecessary duplication of effort.

   b. Provide access for others, such as small business and education and other nonprofit institutions, to highly specialized and often unique research and development facilities, expertise, and capabilities.

   c. Assure the maintenance of DOE's research and development and related capabilities, and to provide an opportunity for stimulating their growth for both immediate and future applications.

8. RESPONSIBILITIES AND AUTHORITIES.

   a. The Under Secretary establishes Departmental policies on R&D work for others.

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

OFFICE OF FEDERAL
PROCUREMENT
POLICY

APR 4 1984

OFPP POLICY LETTER 84-1

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Federally Funded Research and Development Centers

1. Purpose. This policy letter establishes Government-wide policies for the establishment, use, periodic review, and termination of the sponsorship of Federally Funded Research and Development Centers (FFRDCs).

2. Supersession. Memorandum from the Chairman to the Members of the Federal Council for Science and Technology, dated November 1, 1967, which set forth criteria for identification of FFRDCs and the requirement for a master Government listing of these centers, is superseded by this policy letter.

3. Authority. This policy letter is being issued pursuant to Sections 6(a), 6(d)(1) and 6(d)(8) of the Office of Federal Procurement Policy Act, as amended, 41 U.S.C. 405 (a), (d)(1) and (d)(8), which empower the Administrator of OFPP to prescribe Government-wide procurement policies and to complete action on the recommendations of the Commission on Government Procurement.

4. Background. The Departments of Energy, Defense, Health and Human Services, the National Aeronautics and Space Administration and the National Science Foundation currently sponsor a total of 34 FFRDCs. Non-sponsoring departments and agencies also utilize these FFRDCs. Federal funding of FFRDC's currently exceeds 4 billion dollars per year.

In 1967, a Government-wide policy for the identification and maintenance of a master listing of these FFRDCs was issued (reference paragraph 2 - Supersession). In 1972, the Commission on Government Procurement recommended that the Federal Government keep open the option to organize and use FFRDCs to satisfy needs that cannot be satisfied effectively by other organizational resources. The Commission also recommended that agency heads periodically review the continuing need for existing FFRDCs and approve any proposal for new FFRDCs, with specific attention paid to the method of ultimate termination of sponsorship. This policy letter is based on the executive branch consideration of the Commission's recommendations.

5. Definitions

a. Primary Sponsor — The executive agency which manages, administers or monitors overall use of the FFRDC.

b. Sponsor means an executive agency which funds and monitors specific work of a continuing nature with an FFRDC and is party to a sponsoring agreement. Multiple sponsorship of an FFRDC is possible so long as one agency agrees to act as the primary sponsor for administrative purposes.

c. Federally Funded Research and Development Center (FFRDC).

(1) FFRDCs do not have a prescribed organizational structure. They can range from the traditional contractor-owned/contractor-operated or Government-owned/contractor-operated (GOCO) organizational structures to various degrees of contractor/Government control and ownership. In general, however, all of the following criteria should be met before an activity is identified as an FFRDC:

(a) Performs, analyzes, integrates, supports (non-financial) and/or manages basic research, applied research, and/or development. (Activities primarily engaged in routine quality control and testing, routine service activities, production, mapping and surveys, and information dissemination, even though otherwise meeting the requirements of paragraph 5.c., are specifically excluded from FFRDC designation).

(b) Performance of the functions in 5.c.(1)(a) is either upon the direct request of the Government or under a broad charter from the Government, but in either case the results are directly monitored by the Government. However, the monitoring shall not be such as to create a personal services relationship, or to cause disruptions that are detrimental to the productivity and/or quality of the FFRDC's work.

(c) The majority of the activity's financial support (70% or more) is received from the Government with a single agency usually predominating in that financial support.

(d) In general, most or all of the facilities are owned by the Government or funded, under contract, by the Government.

(e) The activity is operated, managed and/or administered by either a university or consortium of universities, other nonprofit organization or industrial firm as an autonomous organization or as an identifiable separate operating unit of a parent organization.

(f) A long term relationship evidenced by specific agreement exists or is expected to exist between the operator, manager, or administrator of the activity and its primary sponsor.

(2) In addition to the above criteria, the relationship between the activity and the Government should exhibit the following characteristics in order to qualify for FFRDC identification:

(a) The activity (organization and/or facilities) is brought into existence at the initiative of a Government agency or bureau to meet some special research or development need which, at the time, cannot be met as effectively by existing in-house or contractor resources.

(b) Work from other than a sponsoring agency is undertaken only to the extent permitted by the sponsoring agency and in accordance with the procedures of the sponsoring agency.

c) The activity, whether the operator of its own or a Government-owned facility, has access, beyond that which is common to the normal contractual relationship, to Government and/or supplier data, employees, and facilities needed to discharge its responsibilities efficiently and effectively, whether the data is sensitive/proprietary or not.

d) The primary sponsor undertakes the responsibility to assure a reasonable continuity in the level of support to the activity consistent with the agency's need for the activity and the terms of the sponsoring agreement.

e) The activity is required to conduct its business in a responsible manner befitting its special relationship with the Government, to operate in the public interest free from organizational conflict of interest, and to disclose its affairs (as an FFRDC) to the primary sponsor.

6. Policy.

a. General. Agencies will rely, to the extent practicable, on existing in-house and contractor sources for satisfying their special research or development needs consistent with established procedures under The Economy Act of 1932 (31 USC 1535), other statutory authority or procurement/assistance regulations. A thorough assessment of existing alternative sources for meeting these needs is especially important prior to establishing an FFRDC. This Policy Letter does not apply to the performance of commercial activities. Performance of commercial activities is governed by OMB Circular No. A-76.

b. Establishment of an FFRDC. In establishing an FFRDC, the sponsoring agency shall ensure that:

(1) Existing alternative sources for satisfying agency requirements cannot effectively meet the special research or development needs (6.a).

(2) At least three notices are placed over a 90-day period in the Commerce Business Daily and The Federal Register indicating the agency's intention to sponsor an FFRDC and the scope and nature of the effort to be performed by the FFRDC.

(3) There is sufficient Government expertise available to adequately and objectively evaluate the work to be performed by the FFRDC.

(4) Controls are established to ensure that the costs of the services being provided to the Government are reasonable.

(5) The responsibility for capitalization of the FFRDC has been defined in such a manner that ownership of assets may be readily and equitably determined upon termination of the FFRDC relationship with its sponsor(s).

(6) The purpose, mission and general scope of effort of the FFRDC is stated clearly enough to enable differentiation between work which should be performed by the FFRDC and that which should be performed by a non-FFRDC.

c. Sponsoring Agreements. When FFRDCs are established, long-term Government relationships are encouraged in order to provide the continuity that will attract high quality personnel to the FFRDC. This relationship should be of a type to encourage the FFRDC to maintain currency in its field(s) of expertise, maintain its objectivity and independence, preserve its familiarity with the needs of its sponsor(s), and provide a quick response capability. A contract is the generally preferred instrument under which an FFRDC accomplishes effort for its sponsor(s). However, there may be instances where other legal instruments may be appropriate. A written agreement of sponsorship between the FFRDC and its sponsor or primary sponsor where more than one sponsor is involved may be used in addition to the contract or other legal instrument under which an FFRDC accomplishes effort. The specific content of a sponsoring agreement will vary depending on the situation. However, there are certain areas common to all situations that must be addressed. The following requirements must be addressed in either a contract, a sponsoring agreement or sponsoring agency's policies and procedures.

(1) Mandatory Requirements

(a) A delineation of the purpose for which the FFRDC is being brought into being along with a description of its mission, general scope of effort envisioned to be performed, and the role the FFRDC is to have in accomplishment of the sponsoring agency's mission. This delineation must be consistent with the definition of an FFRDC set forth in paragraph 5.c(1)(a) and will be sufficiently descriptive so that work to be performed by the FFRDC can be determined to be within the purpose, mission and general scope of effort for which the FFRDC was established and differentiated from work which should be performed by a non-FFRDC. This delineation shall constitute the base against which changes in an existing FFRDC's purpose, mission or general scope of effort will be measured.

(b) Provisions for the orderly termination or nonrenewal of the agreement, disposal of assets and settlement of liabilities. The term of the sponsorsing agreement will not exceed five years but can be renewed, as a result of periodic review, in not to exceed five year increments.

(c) A prohibition against the FFRDC competing with any non-FFRDC concern in response to a Federal agency formal Request For Proposal for other than the operation of an FFRDC. This prohibition is not required to be applied to any parent organization or other subsidiary of the parent organization in its non-FFRDC operations. However, sponsoring agencies may expand this prohibition as they determine necessary and appropriate.

(d) A delineation of whether or not the FFRDC may accept work from other than the sponsor(s). If non-sponsor work can be accepted, a delineation of the procedures to be followed along with any limitations as to the clients (other Federal agencies, State or local governments, non-profit or profit organizations, etc.) from which work may be accepted. Limitations and procedures with respect to responding to requests for information as to an FFRDC's capabilities or qualifications are inherently a part of the "work for others" question and will be addressed by the sponsoring agency.

(2) Other Requirements As Appropriate

(a) When cost type contracts are used, the sponsor(s) should identify any cost elements which will require advance agreement. Such items may be, but are not necessarily limited to, salary structure, depreciation, various indirect costs such as independent research and development or others as determined appropriate by the sponsor(s).

(b) Where fees are determined by the sponsor(s) to be appropriate, considerations which will affect their negotiation should be identified. Such considerations may be, but are not necessarily limited to, weighted guidelines, risks, use of Government furnished property and facilities, needs or others as determined appropriate by the sponsor(s).

(c) Other provisions as determined appropriate by the sponsor(s).

d. Changing the Basic Scope of an Existing FFRDC's Sponsoring Agreement. In changing the purpose, mission and general scope of effort to be performed or role of an existing FFRDC as set forth in its sponsoring agreement (see 6.c.(1)(a)), the sponsoring agency shall make such changes consistent with its statutory authority and the requirements for establishing a new FFRDC as set forth in paragraph 6.b.

e. Use of the FFRDC by the Sponsor or Primary Sponsor in the Case of Multiple Agency Sponsorship. The sponsor, or primary sponsor in the case of multiple sponsorship, will ensure that all work it places with its FFRDC(s) is within the purpose, mission, and general scope of effort of the FFRDC (paragraph 6.c.) and in accordance with this Policy Letter. This includes work a sponsoring agency agrees to accept from a non-sponsoring Federal agency under the provisions of The Economy Act of 1932 (31 USC 1535) or other statutory authority. Sponsoring agencies must comply with applicable procurement or assistance statutes, policies and regulations for non-competitive actions before placing work which is outside the scope of the sponsor's contractual or sponsoring agreement with an FFRDC.

f. Use of an Existing FFRDC by a Non-Sponsoring Federal Agency. Non-sponsoring Federal agencies may use an FFRDC only if the terms of the FFRDC's sponsoring agreement or contract permit work from other than a sponsoring agency. Where use by a non-sponsor is permitted by the Sponsoring Agreement, the work must require the special relationship of an FFRDC as defined in paragraph 5.c. and either be treated as a direct procurement (action) or processed under The Economy Act of 1932 (31 USC 1535) ~~or other~~ statutory authority. Work processed under The Economy Act of 1932 (31 USC 1535) or other statutory authority must clearly fall within the purpose, mission and general scope of effort established by the sponsoring agency for the FFRDC (paragraph 6.c.). Processing under the Economy Act or other statutory authority is subject to agreement by the receiving agency. Non-sponsoring agencies must fully comply with procurement or assistance statutes, policies and regulations for non-competitive actions prior to placing work directly with a specific FFRDC. The FFRDC must comply with the procedures established by the sponsoring agency (paragraph 6.c.(1)(d)) before accepting work from a non-sponsoring Federal agency.

g. Use of an Existing FFRDC by Other Than a Federal Agency. Work from other than a Federal agency may be accepted only to the extent permitted by the sponsoring agency. The FFRDC must comply with the procedures established by the sponsoring agency (paragraph 6.c.(1)(d)) before accepting work from other than a Federal agency.

h. Consulting Services. Agencies sponsoring FFRDC work which constitutes consulting services, as defined by OMB Circular No. A-120, will comply with the provisions of that Circular.

i. Production/Manufacturing. FFRDCs will not be asked to perform quantity production and manufacturing work unless authorized by legislation. Such activities as breadboarding, modeling or other tasks inherent to R&D are permissible.

j. Periodic Review. Prior to renewal of a sponsoring agreement, agencies shall conduct a comprehensive review of their use and need for each FFRDC that they sponsor. Where multiple agency sponsorship exists this review will be a coordinated interagency effort. When the funding for an FFRDC is a specific line item within the sponsoring agency's budget, the comprehensive review may be done in conjunction with the budget process or the review may be done separately. The sponsoring agency(s) shall apprise other agencies who use the FFRDC of the scheduled review and afford them an opportunity to assume sponsorship in the event the current sponsorship is determined no longer appropriate. Final approval to continue or terminate an agency's sponsorship arrangement with a given FFRDC as a result of this review shall rest with the head of that sponsoring agency. The results of this review will be formally documented. The periodic review should include:

(1) An examination of the agency's special technical needs and mission requirements to determine if and at what level they continue to exist.

(2) Consideration of alternative sources to meet the agency's needs. Such consideration will include compliance with the Notice and Publication requirements of P.L. 98-72 (15 USC 637(e)) prior to renewal of the contract or Sponsoring Agreement unless otherwise exempted.

(3) An assessment of the efficiency and effectiveness of the FFRDC in meeting the agency's needs.

(4) An assessment of the adequacy of the FFRDC management in assuring a cost effective operation.

(5) A determination that the guidelines of section 6 are being satisfied.

k. Termination or nonrenewal of an FFRDC Relationship. When a sponsor's need for the FFRDC no longer exists, the sponsorship may be transferred to one or more Government agencies, if appropriately justified. Otherwise it shall be phased out, the assets disposed of and all liabilities settled as provided by the terms and conditions of the sponsoring agreement.

7. Action Requirements.

a. Not later than September 30, 1984, each agency currently sponsoring an FFRDC will review the terms of its existing agreements with the FFRDCs for compliance with this policy letter. Where existing agreements do not comply with this policy letter the primary sponsor will develop a schedule to bring the agreements into compliance not later than the next contract renewal or five years from the effective date of this policy letter, whichever comes first.

b. Where the review required by 7.a. reveals that a clear statement of the purpose, mission and general scope of effort, as described in paragraph 6.b.(6) and 6.c.(1)(a), does not exist, the sponsoring agency shall ensure such a statement is developed not later than September 30, 1984.

c. The primary sponsor will notify the Office of Science and Technology Policy prior to designating any new organization as an FFRDC (paragraph 6.b.), changing the basic scope of effort of an existing FFRDC (paragraph 6.d.) or changing the status of an existing FFRDC (paragraph 6.k.).

d. The National Science Foundation will maintain a master Government list of FFRDCs based upon the definition in this Policy Letter.

e. FFRDCs will be identified by their primary sponsors who will provide information, including funding data, on the type of R&D being performed by the FFRDCs to the National Science Foundation upon their request for such information.

f. Each agency head is responsible for ensuring that the provisions of this policy are followed.

8. Effective Date. The Policy Letter is effective (60 days after publication in the Federal Register).

9. Implementation. Aspects of this policy letter requiring implementation will be covered by the Department of Defense, the General Services Administration and the National Aeronautics and Space Administration in the Federal Acquisition Regulation not later than 180 days from the date of this policy letter. Implementation will be written so as to be compatible with the requirements, as of the date of this policy letter, of FAR 17.6 "Management and Operating Contracts" when the arrangement with an FFRDC constitutes a management and operating contract.

10. Information Contact. All questions or inquiries about this policy letter should be submitted to the Office of Management and Budget, Office of Federal Procurement Policy, telephone (202) 395-6810.

11. Sunset Review Date. This policy letter will be reviewed no later than six years after its effective date for extension, modification, or rescission.

Donald E. Sowle

Donald E. Sowle
Administrator

ADDITIONAL MATERIAL

International Communications Industries Association
(FORMERLY NATIONAL AUDIO-VISUAL ASSOCIATION)
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April 3, 1987

Senator Carl Levin
Chairman, Subcommittee on Innovation, Technology and Productivity
428 A Russell Building
Washington, D.C. 20510-6350

Dear Senator Levin:

We are very pleased you are holding hearings on government contracts which establish non-profit Federally Funded Research and Development Centers as competitors to for-profit companies.

This is a very serious problem which has long needed review by the Congress. Through the FFRDC system, the executive agencies are skirting the requirements of Competition in Contracting Act by having multi-year sweetheart arrangements with non-profits in which no competition occurs for the work the non-profits do.

Once a FFRDC is set up, there is little a private company can do, because there are no competitive opportunities. The work that a private company might do is never opened up for bids. There is nothing more unfair nor more detrimental to the free enterprise system, than for the Federal government to award multi-year monopolies to sustain the commercial work of non-profits.

While investigating one such FFRDC proposal, I wrote two magazine articles on the subject. These articles highlight some of the key issues that will be discussed during your April 7 hearing. Therefore, I respectfully request that this letter and the two articles be inserted as a part of the official hearing record.

We appreciate your leadership in this area, Senator Levin, and we wish you every success with your hearing.

Sincerely,

Kenton

Kenton Pattie
Senior Staff Vice President

KP/tlh
Enclosures for the Hearing record: Two articles:
1. DoD's Software Engineering Institute from the August, 1984 edition of Computer Griphics World
2. DoD Software Initiative Neglects Private Industry from the September, 1984 edition of Computer Graphics Today

VIEWPOINT

DOD's Software Engineering Institute

Reprinted from the August 1984 edition of Computer Graphics World. Copyright 1984 by PennWell Publishing Company.

By Kenton H. Pattie

Kenton Pattie is senior staff vice president of the International Communications Industries Association, where he is a lobbyist responsible for developing and maintaining governmental contacts. His previous experience includes working in the U.S. Senate for almost ten years.

Mr. Pattie earned his B.A. from Ottawa University, Kansas, and has an M.A. from the George Washington University.

The Department of Defense (DOD), after breaking ground for some of the early work of the computer industry and having become one of its major clients, has become dissatisfied with the very companies it helped to create.

A recent Institute for Defense Analyses (IDA) report claims that the computer software for which DOD spends between $5 and $6 billion each year is produced by an "immature, labor-intensive" private work force of 50,000 programmers of whom "only a minority have had formal exposure to recent software engineering ideas." The report goes on to charge that as long as contracts are won and deliveries accepted, computer industry management perceives little incentive for upsetting the status quo.

Disenchantment with the industry is echoed by Lt. Colonel John Leary, Office of the Undersecretary of Defense for Research and Engineering, who says: "How do I tell if I'm being smoked by the contractor? There are as many opinions as there are contractors. I have no way to tell if the contractor is right... they popularize their own methods."

The view at the Pentagon is that computer firms realize greater profits through private sector sales and, therefore, as the IDA report states, new technology development tends to be geared towards the more profitable commercial applications and markets. The report says that the private firms' performance for DOD is unsatisfactory for several reasons.

Defense requirements are larger and more complex than those considered large by commercial standards.

Private firms accept real-time response in the microsecond range, while military missions require response in the millisecond range.

Defense software has to operate in "bare and remote" environments, too far from commercially supported host environments.

Whereas computer software failure in a commercial system may have unpleasant economic or even life-threatening consequences, the failure of a military system may well imperil the defense of the nation.

If you think this is a rather morbid outlook, read on. There's even more to be glum about.

Taking the position that the problem lies in shortcomings of the computer industry, the Department has decided to create the Software Engineering Insitute (SEI), a non-profit, tax-exempt entity to be run by a university or consortium of universities. While conceding that the new Institute would be offering yet another opinion, Leary feels that SEI's institutional biases will be less harmful than commercial biases. "Without going through the standard procurement procedure to solve a problem, I will be able to go to the bookshelf and pull off the latest report from the Institute."

However, many industry observers feel that SEI will never live up to the dreams of its planners since it will not necessarily cause DOD to rely less on private firms for computer software engineering. Sheer numbers indicate what SEI will be up against. By 1990, 10% of the Department's budget will be for the purchase of software. This could amount to $35.4 billion. Edith W. Martin, Deputy Under Secretary of Defense, predicts that we may well be short over a million software professionals by 1990, by which time we will have become completely dependent on software for our national defense.

Blake Smith, the Air Force procurement officer handling creation of the Institute, says that "it's important we have clear communications with industry. If the Institute comes to industry for information, industry has got to feel the information won't be abused or be used against them. The work of the Institute must be viewed as beneficial to industry too." However, on being asked whether the industry could go directly to SEI to get help or information, Smith responded negatively. SEI will be 100% dedicated to DOD, although other government agencies like NASA may indirectly benefit.

According to Smith, SEI will be created along the same lines as Lincoln Lab, a tax-exempt research and engineering firm on Hascomb Air Force Base run by M.I.T. But when I called Lincoln Lab, with its $250 million budget and payroll of 2,000, this is how the conversation went with Mel Herlin, assistant to the director.

Q: Can a private firm come here directly to get information on the work you are doing?
A: No. The only way is through a government agency.

Q: Do you have a list of research and engineering projects that are currently underway?
A: No. We don't make our work public. It is distributed through the Defense agencies we work with.

Q: Do you mean that people in the Department of Defense receive a list of your reports and order them off that list?
A: No. It's not focused that way.

Q: How do people find out what you are doing?
A: They have to have a need to know.

Opinion

DoD software initiative neglects private industry

by Kenton Pattie

The Department of Defense is going to give $110 million to a university rather than a private company to develop and engineer future computer software.

This decision was made because top officials believe private industry is failing to give the Defense Department the latest in computer technology.

Here's how Deputy Under Secretary of Defense Edith W. Martin describes the problem: ". . . we have generated a technology monster. Costs are rising seemingly without bound; software reliability is of paramount concern; system development cost and schedule predictions are almost invariably overrun; personnel shortages are seriously affecting our development and maintenance abilities, and they promise to become worse."

All of this, in her eyes, is private industry's fault; it can be corrected by a university according to Martin and her staff. What she wants is a university-operated, non-profit business venture called the Software Engineering Institute (SEI). Fourteen universities or consortia of universities are competing for the privilege of operating this government plum.

To get the institute off the ground, Martin dredged up a government procedure that hasn't been used since the Cold War and the Eisenhower Administration: establishment of a federally-funded research and development center.

To create such a center, the rules require that Martin "ensure that: (1) Existing alternative sources for satisfying agency requirements cannot effectively meet the special research or development needs. . ." (Office of Federal Procurement Policy, April 11, 1984).

Since arriving at the Defense Department in 1982, Martin has been surrounded by people who advise her that private industry is not meeting the special research and development needs of the military. Martin caught on fast, since she has spent most of her pre-government years in or around the Georgia Institute of Technology.

One would expect that most universities are eager to win the $110-million, sole-source, five-year contract. After all, it is the foot-in-the-door to a Federal agency that will spend $35 billion annually on software by the year 2000. Once established, the institute will never be closed; it will grow through in-breeding and the school-chums network. Since much of its work will be shielded from the public, Congress and the news media, mistakes will be covered up easily with the blessing of a Joint Department of Defense advisory committee headed by the commander of the Air Force Systems Command.

Yet, with all this, some university experts are highly critical of the plan for the institute. "Researchers won't be free to develop research themselves, but will have to do what they are told. . . The environment will be much too restrictive for the top minds they want to attract," says one university executive.

Another says "They want an impossible situation — it can't be accomplished without any profit motive. If researchers can't do what they want, you won't get the best researchers."

"When they said it was mostly for weapons, they killed the appeal to me. The Institute should serve industry as well as defense. But, they said 'no' to that," says another university representative.

Martin's staff counters that the institute "will be on the cutting edge of technology." But, the rules isolate the institute from industry; they prohibit the institute from providing information to any private, for-profit firm. The institute

Continued ...

must extract information from industry, but may only divulge *its* information to Pentagon brass. Such rules will make it impossible to have good working relations with industry. It also will make it impossible to reach the cutting edge of any technology.

What exactly will the Software Engineering Institute produce?

A clear answer is not available. The official answer is "to bring the ablest professional minds and the most effective technology to bear on rapid improvement of the quality of operational software in mission-critical computer systems." Governmentese for "anything."

While the rules prohibit the institute from actually producing commercial software, the plan seems to say it is acceptable: ". . . automated software factory will be a primary vehicle for technology transition. The SEI shall develop and evolve the concept and architecture of the software factory, and shall maintain a model software factory which will represent the standard of excellence for software engineering practice."

Not happy with one "software factory" the plan calls for "software factories throughout the defense community."

At a time when President Reagan is urging Federal agencies to rely on private enterprise, Martin is saying she prefers universities rather than private enterprise. She wants the institute under her thumb. "An agency further from the government would be less familiar with our business practices," she said on May 4, 1984.

Rather than work harder at unraveling the atrocious procurement practices of the Defense Department, Martin is laying all the blame on private industry. Yet, the "technology monster" she talks about was created not by industry but by the bad business practices of bureaucrats at the Pentagon. Rising costs and overruns are usually the fault of unrealistic specifications written by Defense employees and poor contract management by service procurement officers.

At a time when our industry is making a tremendous financial investment in attaining the latest technology, Martin is saying a university could do it better. At a time when our industry is leading the world in computer technology, she is leading generals into the ivory tower.

Unless Congress says no to Martin this fall, it will be many years and hundreds of millions of dollars before anyone again raises questions about the value of this institute. Once established, it will slip silently into a shroud of secrecy. We'll never know if the "finest minds" ever made it to the "cutting edge."

But, sooner or later, some field commander in a desperate moment of computer warfare is going to discover the hard way how wrong it is to ask a university to build a better software factory.

Kenton Pattie is senior staff vice president for NAVA, the International Communications Industries Association.